TYROCINIUM CHYMICUM:

OR,

Chymical Essays,

Acquired from

The Fountain of Nature,

AND

Manual Experience.

By *John Beguinus* Almoner to the most Christian King of *France.*

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De Silva

THE
Author's Dedication,

I Dedicate, offer up, and bequeath, This Work, such as it is, as alſo my ſelf, and all that is called mine, To the only Wiſe *GOD*, Author of all Good: To whom be all Praiſe, Virtue, and Power, aſcribed, for ever and ever. *AMEN.*

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AMEN.

Paracelſus *in his Book of Tincture of Natural things*, Chapter 1. *ſaith*,

FIrſt, you muſt Learn Digeſtions, Diſtillations, Sublimations, Reverberations, Extractions, Solutions, Coagulations, Fermentations, and Fixations; and you muſt alſo know what Inſtruments are required for uſe in this Work; as Glaſſes, Cucurbits, Circulatory Veſſels, Veſſels of *Hermes*, Earthen Veſſels, Balneums, Wind Fornaces, Fornaces of Reverberation, and other ſuch like: as alſo a Marble, Mortars, Coals, *&c.* So may you at length proceed in the Work of Alchimy, and Medicine.

But

But as long as you ſhall by Phantaſie and Opinion adhere to feigned Books, you will be apt for, and Predeſtinated to none of theſe.

Epigramma Authoris ad Benevolum Lectorem.

Quiſquis es, O Lector, noſtro tu parce Labori,
Quæ ſunt dicta modo, dicta fuere prius:
Et quæcunq; meo parvo ſunt ſcripta Libello,
Ut mea, non mea ſunt, ſic tua, non tua ſunt.

TYRO-

TO THE
READER.

IT becomes every man, about to transcribe, or render the Works of another in his own native Tongue, neither to add any thing of his own, nor to omit of the Author's; least in so doing, he should maim the same by abstracting, or render them monstrous by impertinent additions. Wherefore, avoiding these extreams, I offer this Little work, (not gorgeously adorned with paintings of Rhetorick, but plainly cloathed in an English Habit) to the Searchers into the wondrous Mysterys of Nature, by them to be viewed, and reviewed, to be approved, or condemned (if any thing herein may justly be censured) as they shall think fit. Yet, I would not have any Man to perswade himself, that I present This Tyrocinium *as a Guide to the most Experienced, but rather as a necessary auxiliary to Pupils, and such as are desirous to enter upon the* Praxis *of this Laudable Science, but hitherto, perhaps for want of Expert knowledge of the Latin Tongue, or rather not finding experienced Masters, could not*

understand how, or where to begin. For such only, this Book was written by the Author, and to the same end it is now translated. Therefore if you find benefit by the perusal hereof, extol not the Author, nor commend the Translator, but praise God, who is the Giver of all good Gifts, and by whom all Sciences were communicated to the Children of Adam.

The moſt Material *ERRATA*'s are thus Corrected.

PAge 2. line 27. for ſow, read *ſnow*. l. 35. for Philoſophicks, r. *Philoſophick*. p. 7. l. 2. for Antimony, r. *Anatomy*. l. 16. for to boiled, r. *to be boiled*. p. 8. l. 12. for forced r. *feared*. p. 30. l. 20. for Cinnen Cloath, r. *Linnen Cloath*. p. 47. l. 18. for enduring, r. *inducing*. p. 57. l. 22. for by gradually, r. *gradually*. p. 70. l. 23. for Tincture, r. *the Tincture*. p. 72. l. 12. for upon Oil, r. *upon the Oil*. p. 75. l. 16. for Oriental Saffron ʒſs. r. *Oriental Saffron* ʒj. *ſs*. l. 18. for Coltsfoot, r. *Aſarabacca*. p. 88. l. 5. for Crocus Martis Stellate, r. *Regulus Martis Stellate*. p. 95. l. 18. for Sols, r. *Sol*. p. 109. l. 22. for Calcine in a Crucible, r. *Calcine it in, &c*. p. 129. l. 19. for And much Coſt, r. *And as much Coſt*.

TYROCINIUM CHYMICUM,
In three Books.

BOOK I.

CHAP. I.

Touching the definition of Alchymy.

CHymiſtry is the Art of diſſolving natural mixed bodies, and of coagulating the ſame when diſſolved, and of reducing them into ſalubrious, ſafe, and grateful Medicaments. What Alchymy is.

Chymia is a Greek word; the Latines render it an Art making Liquor, or diſſolving things ſolid into Liquor: it is likewiſe called κατ' ἐξοχήν, becauſe Chymiſtry teacheth to diſſolve (that which is moſt difficult) and to coagulate. The Etymology of the word *Chymia*.

If any one call it Alchimy, He, in the *Arabian* manner declares the excellency thereof.

If the Spagyrick Art, he ſhews its principal Offices, *viz.* συγκρισιν and διαλυσιν; that is to ſay, Conjunction and Separation.

If the Hermetick Art, he demonſtrates its Author, and Antiquity.

If the Diſtillatory Science, he ſhews its Authority and Function.

But ſince all Diſciplines are either Theorical, or Practical; Chymiſtry not acquieſcing in the knowledge and contemplation of mixt bodies, as a natural Science; but having regard τὸ ἔργον, or τὸ πρᾶγμα (that is) to the work or buſineſs, *viz.* to Magiſterys, Tinctures, Quinteſſences, and ſuch like; unto it, is worthily granted a place among practical Arts and Diſciplines: although happily ſome may be found, who, being contented with the Theory only, accidentally, either for want of ſutable Maſters, or impeded by other more weighty buſineſſes, apply not themſelves to the moſt pleaſant labours in the practical part thereof required.

Object. The Objection of this Art is, that the body is mixt and concrete; but wherein it is moveable is not inſpected, for this is the part of natural conſideration, *viz.* to obſerve how far a body is diſſolvable and coagulable. Bodies are eitheir imperfectly mixt, as Dew, Hail, Sow; or perfectly mixt, as Plants, Fruits, Metals, Stones, Trees, and Animals of every kind. Whence it is manifeſt, how egregiouſly they are deceived, who, hearing the name of an Alchymiſt, preſently conclude, that Man imploys himſelf in nothing elſe, than the tranſmutation or Metamorphoſing of Metals, and meditates on no other thing than the wonderful Myſtery of the Philoſophicks Stone; Whereas,

The

The intention of this Artiſt, is to prepare moſt ſweet, moſt wholſome, and moſt ſafe Medicaments. And herein it is that our Art is diſtinguiſhed from the vulgar *Pharmacopœa*, which alſo confects Medicines, ſafe indeed, and wholſome, but leſs grateful to the diſeaſed. For as to ſweetneſs, or pleaſure in taking, it muſt needs be granted, that the ſick will ſooner take Conſerve of Roſes, with which 4 grains of Mercury, working by ſeidge, only are commixed, than many drams of *Diacatholicon*: and will more willingly take one only of the bleſſed Pills of *Quercetanus*, or two Pills of his *Panchymagogon* Electuary, than 10, or 15, without them, of gilded and fetid Pills, or four grains of Mineral *Bezoar*, of the moſt famous Dr. *Hartmannus*, or eight grains of Diaphoretick Antimony of *Crollius*, than any other Sudorifick potion: And much rather a little of the Cream or Magiſtery of Tartar, than an agoniſtick draught of Apozeme or Syrup of any *Magiſtrale*, laboriouſly confected according to a deſcription of I know not how many foot long.

Chymical Medicines are helpful to the vulgar.

Yet in a ſenſe the Potions and Veſſels of vulgar Medicaments, do in odour far exceed the Chymical; namely, when the Sick, only hearing of them before they take then in their hands, with the nauſeous imagination of their taſte and odour, being not provoked with any magnetick force, ἄνω καὶ κάτω, purge upward, and downward, which hitherto by Chymical Medicaments could not be performed.

They ſay, Spagyrick Artificers glory in the ſweetneſs of their Remedies, but Medicines pre-

pared in the ſhops of Apothecarys, have obtained the praiſe of ſalubrity and ſafeneſs of Curation. For, ſay they, your Remedies are not more wholeſome and more ſafe than ours, being not enough ſalubrious or ſafe: ſince yours for the moſt part are venomous and plainly repugnant to humane Nature, as being Metallick and taken from Minerals; and generally are more ſharp, more corroſive, and more hot than is convenient, and alſo very ſtrongly ſmell of the fire. Theſe indeed are forcible weapons, and are ready to caſt down the ſtronghold of Chymiſts, if they be not dexterouſly enervated with the Buckler of Reaſon and Experience. It can ſcarcely be denyed, but that moſt of our Medicines are taken from out of the family of Minerals and Metals. But if the Ancient and famous Phyſicians did not only uſe them, but crude and unprepared, as in the preſcriptions of *Galen*, *Dioſcorides*, and in the Antidotory of *Nicholas* of *Myrepſicum*, and others is to this day to be ſeen, and ſome moſt famous Phyſicians of late time, as *Rondeletius* uſed crude Mercury in Pills of *Barbaroſſa*, for expelling the *Neapolitan* diſeaſe: *Crato* the moſt fortunate Phyſician of three *Ceſars* uſed *Cinnabar*, for removing the *Vertigo*; and others have uſed Antimony, as *Cardanus*, *Julius*, *Alexandrinus* and *Mathiolus*: Vitriol was uſed by *Geſnerus*, *Crocus Martis* for the Jaundies, by *Fallopius*; and for all affects of the Lights, Sulphur hath generally been by them uſed: Why then ſhould it not be lawful for us to transfer the ſame things rightly prepared, and perfectly freed from all venomous malignity to medicinall uſe? eſpecially ſince

Chymical Medicines are not venomous and repugnant to humane Nature although Metallick.

ſince we have ſeen thoſe, who, with vulgar Medicaments of the Apothecarys, could not recover a perfect ſtate of Health; yet at the perſwaſion of the ſame Miſochymiſts have removed themſelves to Metallick Baths, or Mineral fountains through the continued uſe of which, they have been perfectly cured. Whence we indeed may rightly conjecture, that in Minerals and Metallicks of this kind, there are concluded a certain fixed Balſom, and moſt potent Spirits, not obnoxious to corruption. The ſame alſo in the uſe of Chyrurgical Medicaments is conſpicuous; for of their Remedys is ſcarce any of great virtue, unleſs with it ſome Metal or Mineral be commixed. But far be it, that the ſame crude & unprepared (according to the Cuſtom of the Ancient, and ſome of the Phyſicians of late times) ſhould be by us thought fit to be re-received inwardly into the body.

The true Correction of Malignant Medicines.

The profitable muſt be ſeparated from the unprofitable; the venom from the ſalutary Mummy; and the Kernel and Marrow uncaſed from Rindes, Shells, Huſks, and Feces. So at length from thence may Remedies be taken apt for the Cure of moſt deplorable diſeaſes, quickly, ſafely, and pleaſantly, if they be adhibited by learned, expert, and circumſpect Phyſicians, and according to the preſcribed Rules of *Therapeia*. The Viper, a beaſt moſt venomous, being rightly prepared, is the *Baſis* of Treacle, that univerſal *Alexipharmacon*, approved by the Experience of ſo many Ages. So we ſee daily, that from vulgar Serpents, they now commonly prepare a moſt certain preventionary and curative Medicine againſt venoms of every

kind. Likewiſe the Sea-Dragon, which the *French* call *Lavive*, hath in his back a Bone, which being taken out, thence is made a moſt delicate food. In the ſame manner alſo things dug out of the Earth, may plainly be reduced to that Nature of Mediocrity, the whole being reſolved into diſtinct parts, and the malignant and mortiferous qualities removed; that moſt certainly, thoſe, who rightly uſe ſuch, legitimately prepared, admit not a mortal enemy, but a friendly Gueſt, not a poyſonous venome, but an *Alexapharmacon*, and Antidote againſt all diſeaſes into the penetrales of their life. For if the venemoſity of Metals and Minerals depend upon their form; who ſees not, if theſe by Chymical Artifice be reſolved into their three principles, that their deadly and deſtructive qualities are removed? And if you ſhall conceive the malignity to be eſtabliſhed in any of the undivided parts, you will ſo much the eaſier underſtand, that when the whole is divided into parts, that may be ſegregated. And in this manner is the correction of mortiferous medicaments; which, how ſafe, and ſalubrious it is, might be proved by infinite Examples, if we thought it were not ſufficiently known already.

Let therefore Miſochymiſts forbear to abhor the uſe of Minerals and Metals, to be exhibited internally into the humane body; and unadviſedly to fear I know not what, ἰλίαδα τῶν κακῶν, thence to proceed; but let them rather learn of Chymiſts the true way of ſubduing the malignity of Remedies, which venerable Antiquity uſed (as Antimony, Mercury, both kinds of Hellebore, all the Species of *Tithymalus*, *Pityuſa*, *Elaterium*, *Coloquintida*, *Euphorbium*, *Thapſia*, *Scammony*, *Thymelæa*, the

Lazare

Lazure and *Armenian* Stone, *Scoria* of Braſs, *Sandarack*, *&c.*) which is done by the Antimony of the heterogeneal body, into its proper parts; but not by the wonted addition of Maſtick, *Dragacanth*, Spike, Cinnamon, or ſuch like. For he that endeavours ſo to diſſipate, and infringe the venomous qualities of Simples, is not unlike to fooliſh and ignorant Cooks, who, when Carps are to be ſcaled, and boweled, contend that if the choler or bag of the gall ſhall happen to be broke, it is not to be waſhed out, or ſegregated, but with Honey or Sugar to be corrected, and its evil ſavour ſo removed: or if they be to prepare the inteſtines of Animals for mans food, ſhall fooliſhly judge that the ſordid and filthy excrements are not to be waſhed away, but that they are to boiled as they are, with the addition of Amber, or odoriferous Oils poured upon them.

Spagyrick Remedies ſeem not to be wholeſome and ſafe, becauſe they are ſharp and corroſive, and by the violence of fire rendred more Coſtick, and becauſe they ſmell of the fire: but if they be (or while they are) ſharp and corroſive, they are not to be received into the body. Good GOD! how great a quantity of Medicaments ought to be caſt out from the vulgar *Pharmacopoly's*? How great is the number of them to be expunged from their Antidotary's? And how many Condiments are to be removed from their Kitchins? *Cantharides* by *Galen* are numbred among dangerous Medicines, which by eroſion kill; and they are to be but ſparingly taken; and unto theſe he grants it is behovetul they ſhould be commixed, τοῖς γιδλουτείβουσι, and with Diureticks inſtead of a Vehicle. How corroſive Vitriol is, is palpably known to all; and not-

withstanding into Treacle the most commendable Antidote, it is received. Garlick, Onions, Sinape, and *Nasturcium*, how sharp are these? yet are we not affraid daily to use them in our Banquets.

The juices of Lemmons and Citrons dissove the most firm bodies of Pearls and Corrals; yet in the *Cardiack* passion, and in extream imbecility, and decay of strength, a more ready and excellent remedy, is not vulgarly given. Therefore the Acrimony and Costick force of Chymical Remedies is not to be forced, especially, since many are outwardly corroding, which inwardly cannot exercise their force, not only by reason of greater repugnancy of the intestines, and the vegetate strength of the native heat; but also by reason of the noxious humors residing in the Stomach. As we devour not whole handfuls of Salt, nor use we certain pounds of it in broths, but, it may be, we dissolve of it one pugil; and a little Vinegar and Spice we are wont to use for seasoning our meats; so when necessity compels, spagyrick Physicians to the using of sharp Medicaments, they exhibit some drops, or one grain or two, not alone, but mixed with appropriate Liquors. Yea, the most sharp may be so well odulcorated, as they may deposite all their acrimony; which in *Aqua fortis*, and *Aqua Regis* is clearly evinced, if with them Salt of Tartar be commixed.

Chymical Medicines are not dangerous, by reason of their sharpness contracted by fire.

Now as touching the Contagion of fire, which is by them objected, it is a thing so vain and frivolous, as needs no refutation. *Galen* himself in the 18. Chap. *de Theriaca ad Pisonem*, expressly writeth, that

that the fire doth meliorate many things, and ſometimes diſcovers the hidden nature of things, and ſome things alſo it renders apt for uſe, according to our intention. Whence alſo the ſame Element by *Cicero*, is not undeſervedly honoured with the Title of Maſter of Arts, likewiſe *Galen* ſubjects ſharp and biting Minerals to the *Examen* of fire, that they may be rendred more gentle. He eſteems * *Chalcitis* burnt, better than not burnt.

* Red Vitriol.

Balanus Myrepſica, according to *Meſue*, provokes vomiting, and alſo cauſeth dejections by the inferiour parts; but being burnt, and the nauſeous humidity thereof removed, the only force of expelling humours by Seidge remains. So ſublimate Mercury, which is moſt ſharp, abiding the violence of fire with Antimony, is reduced to a moſt gentle, and moſt wholſome *Alexipharmacon*. Likewiſe Iron, when calcined into *Crocus Martis*, with fire of reverberation ſuſtaineth the extreameſt heat of flames, yet they on it impreſs no acrimony to hinder the uſe thereof from being moſt profitable, as it is moſt frequent in *Hæmorrhagia's*, and other Fluxes. On the contrary, how great ſharpneſs do the Water and Oil of Cinnamon acquire in a *Balneum* of vapour only? And in the ſame, how much is Wine made more acid? Whence is this? Can you underſtand the Reaſon? You may, if you can comprehend why the Sun hardens clay, and ſoftens wax; and the ſame makes linnen white, but blackens the face. You are therefore deceived, if you think Spirit of Vitriol contracts

Whence is the acrimony of Chymical Medicaments.

tracts acrimony from external heat: and ſo if you judge that Oil of Salt from the fire of Reverberation is infected with the ſame; for if Salts were not inſited and mixed in theſe, you by the greateſt violence of fire, could never be able to inure ſuch a ſharpneſs. And contrarywiſe, ſhould you uſe the moſt moderate heat that could be in ſome things, yet you ſhall undoubtedly render them more ſharp, by reaſon of the force of preſent Salts.

Chymical Remedies ſmell not of the fire.

Moreover for the *Empyreuma* of Chymical Medicines, it is not of ſuch moment, as under that name they ſhould ſeem violent and dangerous to practical Phyſicians: for if ſuch a thing be inherent in thoſe Medicaments, it took its beginning either from a moderate or ſtrong heat. If from that, and therefore Chymical Remedies are cenſured for obnoxious; then can neither our Meats, or Drinks, or vulgar Medicaments be ſafe and wholſome; ſince, in preparing them, oftentimes a greater degree of fire is required than for Spagyrick Remedies, which is manifeſt in the making of Beer or Ale, where the Mault is firſt with ſtrong fire dryed, afterward boiled with greater. And alſo in ſome Rheniſh Wines, which by reaſon of their wholſomneſs, are uſed by the Northern people in almoſt all diſeaſes, inſtead of a Remedy; and yet to a true maturity, they cannot be brought, but by the benefit of Elementary fire; alſo in broiled fiſh, and ſmoak dryed, roaſted, and boiled fleſh, with many other ſuch like.

The *Empyreuma* how it may be corrected.

But if from this, *viz.* from violent fire, yet thence cannot any thing

of

of peril happen to the ſick, ſince either with ablution or digeſtion it may be corrected; as is ſeen in aſhes, which water being poured on them, depoſite the notes of their calidity received from the fire in a *Lixivium*. Yea, ablution often repeated, renders ſome purging Metallicks and Minerals Chymically prepared, inefficacious for exhauſting depraved humours. How by decoction all things are made ſweet is known, yet there ſeemed to be need of inducing an Enſample to prove the ſame. If by an *Empyreuma*, you ſhall happen thus to underſtand; that when either the potential heat, which is latent in the mixture, as it were under coals, is produced into act by violent fire, and ſo freed from all impediment, exerciſeth more potent force; or when the heat, which therein was diſperſed, is united by the benefit of fire; for this cauſe, neither an *Empyreuma*, nor too much heat is to be feared; ſince it is the office of a Phyſician rightly to uſe hot things of this kind, as alſo others [leſs hot] which if imprudently adhibited, may unavoidably infer detriment to the ſick. But Miſochymiſts ceaſe not to urge us grievouſly, whilſt they pretend our Medicaments are unprofitable, becauſe they are decayed, and take their beginning from periſhed and corrupted mixt things, and are deſtitute of primogeneal humidity, as they ſay. Now if the bodies of mixt things be not to be diſſolved, or (to uſe their odious terms) not to be deſtroyed; Why do they trouble the Harmony of that mixtion? Why do they prepare infuſions, decoctions, and Syrups with violent fire? Why uſe they aſſations? Why parchings? Why diſtillations?

Preparation renders not Chymical Medicaments unprofitable.

ons? Why *Diagridium*, & not Scammony whole? Why *Trochus* of *Alhandal*, & not *Coloquintida* it ſelf? Why in extream imbecillity of ſtrength, when the ſick are ready to expire, preſume they to nouriſh them with a deſtroyed Capon, *viz.* with the diſtilled water thereof, where certainly all the * Temperament and mixture of the whole periſheth? Is it becauſe in this part they would imitate Nature? Who conveys not food undigeſted from the Stomach, nor crude, or while it is whole, for nouriſhing the parts; but deſtroyed, that is, ſeparated from the unprofitable and more groſs parts, and in the ſhop of the Liver reduced, as it were, to a Quinteſſence, they ſay (if you pleaſe to hear it) that if ſucking Infants be purged with their Mothers Milk, having Rubarb infuſed in it, which is often uſed for health-ſake; the Concord, Temperament, and Harmony of the whole Rubarb ſqueezed in the Mothers Milk, is given to the Children; but will the form of this mixture paſſing from its own ſubſtance into another, and again tranſlated from this into another, & ſuffering many mutations, remain whole and intire, and ſo exclude the depraved humours from out of the body? Perhaps hence it is, that ſome Miſochymiſts abhor the uſe of Cheeſe, and alſo Butter, not from any natural antipathy; but becauſe, by reaſon of the deſtroyed concord of the Milk, and the aboliſhed form and temperament thereof, they fear theſe, and ſuch like are unfit for nouriſhing the body. Again, while theſe call Chymical Remedies, dead bodies or Carcaſes, and affirm them to be deſpoliated of

* Κρᾶσις μίξις.

Chymical Remedies are not dead Carcaſes.

of primogeneal humidity; they partly contrary themſelves, and partly ſpeak inconſentaneous to truth. For if they be ſo vile and inefficacious, why do they elſewhere affirm them to act more potently, than the mediocrity of humane temperament permits? Moreover, is it not neceſſary, that as well Animals as Vegetables, ſhould be deprived of that life whereby they live, that is, are nouriſhed, grow, and encreaſe, that they may be rendred apt for the food, and uſe of man? For even the barbarous *Scythians*, although they feed on fleſh, either crude or heated by hunting with the ſwift courſing of Horſes, yet will they not take the beaſts alive into their Mouths, and tear their fleſh, and eat it. So alſo it is expedient, that Plants, Sprouts, and Fruits ſhould die, that they may give forth vital actions in the humane body; that is, they muſt be taken from their Native Soil or Root, leaſt thence they ſhould ſtill attract aliment for conſerving their life, that they may be made apt Remedies for conſerving the health of men, and expelling their diſeaſes. And in like manner Herbs, and other ſuch things ſo mortified, eſpecially, if a legitimate preparation of them precede, happily and ſafely operate, if inwardly taken into the body. And (as by experience, the moſt certain Judge of Verity, I ſhall evince) the life of Vegetables is not deſtroyed by Chymical Operations, nor the primogeneal humidity of mixt bodies by them conſumed. It is certain, and very often proved, that Salts of Herbs, eſpecially hot, if ſeminated in a certain manner, as is unto us known, do produce other herbs of their own Species. Not to mention thoſe ſtupendious and pertinent examples produced by *Quercetanus*, Chapter 23. In his Anſwer to *Anonymus* for the verity of Hermetick Medicine.

In

* The Forreſt of *Arden* in *France*.

* In *Arduenna*, and many other deſert, barren, and dry places, that the Huſband-men in Summer might have ſomewhat to reap, they cut down their Brambles, Broom, and Bryers, which they burn on an heap, and ſcatter the aſhes here, and there, all over the fields, that the plowed Earth by the Salt extracted from them by the benefit of the falling ſhowers may be fatned, and afterward from Seed caſt thereinto, produce good and deſirable Corn. For the Salt of aſhes of this kind, performs the office of dung, becauſe fields could never be impinguate, unleſs they were ſtrewed with the Urines and Salt of brute Animals.*

* There is a wonderful Fatneſs in Salts, as *Plutarch* witneſſeth in *Sympoſiacis*. lib. 1. Queſt. the 9th.

Yet I will not flatly deny, but that ſome living things, and ſuch as are not as yet dead, may ſometimes rightly be adhibited, as a Cock deplumate (about the breech) for extracting the Venome from peſtiferous Carbuncles. And a young whelp externally applyed to cheriſh a cold and weak Stomach by its benign and temperate heat. In like manner I deny not, but that things whole may ſometimes exceed thoſe that are broke, diſſolved, or altered. Alſo they confeſs themſelves to uſe ſome things no leſs deſtroyed, than the Chymiſts do. There remains now one ſcruple, which very much troubles the minds of many, and they have long been held in ſuſpence thereabout, ſo as they could not conſent to the uſe of Hermetick Medicaments; and it is this, that

Chymical Medicaments impreſs not a depraved diſpoſition on the principal Members of the Body.

that they eſpecially, if they be Metallick or Mineral, diſſipate the native heat and Spirits ſuddenly, and leave in the principal parts polluted Reliques, a malignant ferment, and a depraved διάθεσιν [or] diſpoſition; whence ſome by accident are cured, and a little after ſuffering a relapſe, are untimely hurried out of this life.

But Remedies Spagyrically prepared, undeſervedly ſuffer this Reproach; ſince if ſuch a thing by the uſe of them ſhould chance to happen, it is not ſo much to be imputed to the Remedies, as to the Artificers that prepared them, or to the Phyſicians that exhibited them. For it is very well known how great a number there are, who unworthily approach to this moſt noble Art, and having learned, or ſuppoſedly found the uſe of this Science from Books only, and not from their αὐτοψία, or proper experience, unadviſedly prepare *Stibium* or *Hydrargyry*, and ſo prepared, are not afraid to exhibit it inwardly, either for conſerving the health of Man, or for reſtoring the ſame when decayed. With ſuch precipitates of Chymiſts, it is no wonder if they that uſe them be precipited into the Grave. If ſome improvident and prodigal of their own health follow after their Mercurys of life, they follow not life, but death, which they ſometimes buy at a very great rate.

Then the blame of ſo grievous accidents, doth not ſeldom redound to thoſe alſo who adminiſter the ſaid Medicaments, ſome of whom never ſaw the legitimate uſe of them; others of them are plainly unlearned, ſtupid, and ignorant of the whole method of *Galen* and *Hyppocrates*: Such are like to Jews and Patricides, whoſe Religion is no other than after the manner of Thieves, to ſport themſelves

ſelves in others ruine. For like reaſon, the ſame is ſometimes written of vulgar Medicines, and ſuch as are of moſt potent virtues, as the Scammoneate, Helleborate, and ſuch like; when by unskilful Apothecarys they are ſiniſtrouſly prepared, or by the expert, dexterouſly confected, but by Empyricks prepoſterouſly uſed, although the ſame Medicaments may be of excellent uſe, if well prepared, and methodically adhibited.

There is no reaſon therefore, that learned and prudent Phyſicians ſhould abſtain any longer from the uſe of Chymical Remedies, ſince, if they be confected by expert Artiſts (among whom in *France*, *Nicholas Bonne* is famous, the Apothecary of the moſt illuſtrious Duke of *Bullion* in *Arce Sedanenſi*, who hath a ſhop compleatly furniſhed with moſt choice Remedies, as well Galenical as Spagyrical, eſpecially Treacles, both the common and eſſenſified, according to the Rules of *Quercetanus*, moſt exquiſitely and faithfully prepared;) all malignity, if any be in their nature, is removed by the benefit of Vulcan; ſo as it is impoſſible, if they be methodically uſed, that they ſhould either deſtroy the native heat and Spirits, (the individual guards of the Soul) or infer on the principal parts a depraved diſpoſition.

And thus hitherto is ſhown, how under a falſe pretext Chymical Remedies are as it were dangerous, unprofitable, and peſtiferous: and ſo the Cities right in the Re-publique of Medicine is denyed.

Now, that they are more wholſome, and more ſafe than the vulgar, is to be proved; which indeed by what hath been already ſaid, is ſufficiently manifeſted;

feſted; nevertheleſs, that all things may be the better judged of, ſome few things to back our aſſertion ſeem to be needful. Remedies prepared by the Spagyrick Art, are therefore more ſalubrious, and more ſafe than the vulgar, or the ſame after the common and vulgar manner prepared; becauſe in them the pure is ſeparated from the impure, the *Alexipharmacon* from the malignity, the Corporeal from the Spiritual, and the unprofitable from the commodious; and ſo with their bulkineſs they oppreſs not the Stomach, nor do they delay or defer their Operations, but immediately begin to aſſault the Diſeaſes, and ſpeedily compel them to forſake their ſtrong-holds in humane bodies. So Beer that hath ſufficiently purged, is better and more wholſome, than what hath not purged. Wine cleanſed from its Tartar, is more ſafely drunk, than Wine newly preſt from the Grape. So food, the Excrements ſecluded by nature after many Coctions nouriſh all the members of our bodies. Sooner doth the water or Balſom of Cinnamon in ſwounings refreſh the Spirits, than the Cinnamon whole. Likewiſe ſome drops of Oil of Aniſe are more efficacious, than whole Ounces of the ſame unprepared. But the vulgar mind deſpiſeth all preparations, and had rather uſe things whole, than diſſolved into their principles; wherefore he adhibits Medicines partly not ſufficient or convenient; whence it often happens, that the ſick having devoured the noxious, excrementitious, and venomous parts together, with the ſalubrious and profitable, the Diſeaſe being overcome, they are ſoon after afflicted with ſymptoms more grievous, and more dangerous than the diſeaſe it ſelf.

Spagyrick Medicaments are more wholſome, and more ſafe than the vulgar.

Moreover, who knows not that Chymical waters retain the intire odour, and taſte of Vegetables, but the vulgar waters are no other than unprofitable phlegm, and waters eaſily putrefying; and thoſe will dure many years, but theſe ſcarcely a Moneth or two. And as the vulgar waters of *Pharmacopoly's* acquire an extream malignity from the Leaden veſſels; ſo their decoctions in Copper veſſels are no leſs contaminated, which are ſo much the worſe alſo, becauſe in their preparation, the more ſubtile and better parts vaniſh into Air, and a little after, through mouldineſs contracted, they are corrupted and rendred unprofitable.

Alſo their Reſtoratives and Cordials, which are prepared of Corals and Pearls reduced to powder, and ſifted, as alſo of foliate Gold; what other virtue do they manifeſt in the humane body, than the incruſting of the Ventricle, and otherwiſe rendring it more languiſhed, and unapt to perform its office? Whereas, on the contrary, Quinteſſences of Chymiſts and Magiſterys by them confected, as alſo Tinctures of Gold made without Corroſives, eaſily diſſolved in any Liquor; theſe ſo diſſolved, being admitted into the body, renew decayed ſtrength, and reſtore to priſtine vigour. Alſo vulgar Medicaments in Chronical diſeaſes, ſeldom produce the deſired effects; being only taken from Vegetables, with which they are unable totally to extirpate, and pluck up the ſetled Roots of contumacious affects. But Chymical Remedies, eſpecially thoſe prepared of Metals and Minerals, being of more potent force, and of great efficacy, do throughly cure Diſtempers vulgarly uncureable, as the epilepſie, leproſie, quartane fever, gout, Dropſie, &c. ἡδέως, ταχέως καὶ ἀσφαλῶς, that is, pleaſantly,

ſantly, ſpeedily, and ſafely. We therefore thought what we have done, not impertinent to our purpoſe; namely, in the Frontiſe-piece of our Book, to define Chymiſtry, and demonſtrate it to an Art of preparing the moſt grateful, ſalubrious and ſafe medicaments.

CHAP. II.

Of Solution in Genere.

CHymical Solution is ἐργασία, or an Operation wherein the natural mixt body by ſeparation of the Hetrogeneal parts, is deduced into its own three Principles, *viz.* Mercury, Sulphur, and Salt, of which by Nature it was at firſt made. What Solution is.

As *Ariſtotle* of the Natural body hath truly ſtated three principles, *viz.* Matter, Form, and Privation; although they be rather Noetick, than truly hypoſtatick, and as *Galen* the four Elements, *viz.* Fire, Air, Water, & Earth, for principles, although they be remote, yet are they not wholly by him unproperly cited: ſo the Chymiſt, the intelligent Artificer affirms there are 3 ſenſible, and moſt near principles of ſenſible bodies, *viz.* Mercury, Sulphur, and Salt: and in this part follows *Ariſtotle*, of the third Heaven, Text 61. Which place *Peter Ramus* in the Acroamatick Schools, doth over ſtrenuouſly oppoſe againſt the above alledged principles of the Philoſopher; and after him *Kragius* doth vehemently contrary. The three Chymical principles.

the Peripateticks. But by Mercury, Sulphur, and Salt, it is not to be underſtood that Minerals of this kind can by the benefit of Chymical reſolution, be extracted from mixt and concrete bodies; I mean, ſuch as are vulgarly ſold by Merchants. Yet it ſufficeth, that they are ſuch, eſpecially being in the family of Vegetables, and Animals, which are analogous, and have affinity with Minerals, and do ſo far differ among themſelves in Eſſence, Property, and Actions as they are in their kind [more or leſs] Mineral.

What by them is to be underſtood.

Mercury is that Acid, permeable, penetrable, Æthereal, and moſt pure Liquor, whence is all nutrition, ſenſe, motion, virtues, colours, and the retardation of over haſty age. It is made of the Element of Air, and Water: and indeed to the firſt, as far as it is altered by approaching heat, it vaniſhes into air; but as to the other, ſo far as it is difficultly bounded in its own proper limits, it is eaſily contained in another *Terminum*

Mercury.

Sulphur is a ſweet, oleaginous, and viſcid Balſom, conſerving the native heat of the parts, the inſtrument of all vegetation, increaſe, and tranſmutation, and the fountain, and original of all odours grateful and ingrateful. It is aſſimilated to fire, by reaſon of the flame which it eaſily conceives, as all other reſinous and oleaginous things.

Sulphur.

And this peculiar property it hath, *viz.* a power of pacifying and conglutinating extream contrarys.

The property of Sulphur.

For

For as you can never make tenacious Luting of water and ſand, unleſs with them you commix Calx, or other glutinous matter: ſo neither can volatile Mercury, and fixed Salt be tenaciouſly united into one ſubſtance, unleſs by the bond and copulation of Sulphur, which participates of either principle. It contemperates the dryneſs of Salt, and Liquidity of Mercury, by its own viſcoſity; the denſity of Salt, and the permeability of Mercury by its own ſoft fluidneſs, and the bitterneſs of Salt, and ſharpneſs of Mercury, by its own ſweetneſs.

Salt.

Salt is a dry body, ſaline, and defending mixt things from putrefaction, is endowed with wonderful faculties of diſſolving, coagulating, cleanſing, and evacuating; and from it is every ſolidity, determination, taſte, and other infinite virtues. It is analogious to the Earth; not as it is cold and dry, but as it is an Element firm, fixed, and the ſubject of generation of all bodies.

Chymical Principles poſſeſs a nature between Bodies, and Spirits.

But the ſaid principles, to ſpeak properly, are neither bodies, becauſe they are plainly Spiritual, by reaſon of the influx of celeſtial Seeds, with which they are impregnated; nor Spirits, becauſe corporeal, but they participate of either nature; and have been inſignized by Phyloſophers with various names, or at the leaſt unto them they have alluded theſe, as by the following Table will appear.

SALT.	SULPHUR.	MERCURY.
Common Salt.	*Salt-peter.*	*Salt armoniack.*
Unpleasant, & bitter.	*Sweet.*	*Acid.*
Body.	*Soul.*	*Spirit.*
Matter.	*Form.*	*Idea.*
Patient.	*Agent.*	*Informant, or movent.*
Art.	*Nature.*	*Intelligence*
Sense.	*Judgment.*	*Intellect.*
Material.	*Spiritual.*	*Glorious.*

Moreover, every mixt body may be, and by us is resolved into these three principles (so according to the Pythagoreans, every thing, and all things are terminated in three) fixed in the sacred Ternary. Although this might be proved by weighty reasons, yet ocular and evident inspection doth far exceed all these. Therefore, by examples taken from the various kind of mixt things, we shall, for the benefit of young Beginners, delucidate every thing. We will first begin with green Woods, which if you burn, there will come forth a certain Waterinesss, which is plainly unapt for taking flame; and if gathered when converted into fume, it is resolved easily into water (and by the same reason, to seek drink from a flame is not impossible) and this is called Mercury: then there goes forth an oleaginous substance easily inflamable, which resolved into vapours, if taken, will pass into Oil, and that is called Sulphur: at length a dry and terrestrial substance remains, which from the ashes, by the benefit of water is extracted, and in the humid and cold it is dissolved, but in heat congealed, and it obtains the name of Salt. So Milk contains a Sulphureous but-

buttery ſubſtance, then Mercurial Whey, and at length ſaline Cheeſe, or Curds. In Eggs, the White exhibits Mercury, the Yolk Sulphur, the Skins and Shells Salt. In like manner from Linſeed we draw Oil by expreſſion; Water by ſeparation from the Oil; and Salt from the remaining feces, by extraction. By like reaſon from Cloves a moſt famous Mercurial water, a moſt excellent Sulphureous Oil, and from the feces a Salt is extracted. So Nitre is divided into aquoſity, fatneſs, and Salt. No otherwiſe of Sea Salt do we produce Mercury γλυκύπικρον, that is, bitter-ſweet; Sweet Chryſtals plainly of a Sulphureous nature; and at length a moſt fixed Salt. Of Antimony a *Regulus* is made, which is the Mercury thereof; then a Red Sulphur conceiving flame; and at length a Salt, which is vomitive. And thus may you of all other things judge the ſame.

But you are chiefly to note, that none of the aforeſaid principles can be found ſimple, and alone, that doth not participate with the other. For Mercury contains a Sulphureous and ſaline ſubſtance; Sulphur a Salt and Mercurial ſubſtance: And Salt an oleaginous and Mercurial ſubſtance.

No principle is plainly ſimple.

It is alſo to be obſerved, that in the Spagyrick ἀναϛοιχειώσει, or ſeparation of parts after ſolution, beſide the former precited three principles truly active, there are two other ſubſtances, which by Chymiſts are not admitted into the number of principles, becauſe they are only as it were the Shells or Coverings of the ſaid principles, and are deſtitute of all Hyppocratick

The *Caput-mortuum* and phlegm are not principles.

cratick * virtue; One of which is dry, a ſandy Earth or lifeleſs aſhes, and it is called damnate Earth, and *Caput-mortuum*, endewed with no other virtue then, than drying and emplaſtick, and it is eaſily converted into Glaſs. The other is humid, and accidentally airy, *viz.* inſipid and unſavoury phlegm, which only moiſtens, without any other * Energy or Medicinal activity.

γ Δυνάμεις.

* Ἐνέργειαι.

CHAP. III.

Of Calcination.

THere are two kinds of Solution, *viz.* Calcination and Extraction.

Calcination.

Calcination is the Solution of the mixt body into a Calx.

It is defined by *Geber*; that pulveriſation of a thing is made by fire, through privation of the humidity, conſolidating the parts. By Calx Chymiſts underſtand every moſt ſubtile powder made by ablation of the ſuperfluous humidity, eſpecially from Minerals. But when the powder or Calx is plainly rendred impalpable, and moſt ſubtile as to ſenſe, like the fineſt Flower, then do they call it * *Alcohol*; the ſame appellation they properly give to the moſt ſubtile Spirit of wine, rectifyed by often repeated diſtillations; which then they call *Alcohol* of wine.

Calx of Chymiſts.

* Read *Alcohol.*

Alcohol of wine.

Cal-

Calcination is made by Corroſion or Ignition.

Corroſion is a Calcination of the body by things corroſive. This is done divers ways, but eſpecially by four, *viz.* by Amalgamation, Precipitation, Stratification, and Fumigation.

Amalgamation is the corroſion of a Metal by Mercury. And this is done when a Metal filed ſmall, or beat out into very thin plates, is commixed with eight parts of Mercury, or eight times its own weight of ☿, that it may be a Maſs every where like unto it (and be as one body) for diſſolving the unity of that Metal: for the *Hydrargyry* being evaporated over a fire, the Metal is left like unto a thin Calx. Amalgamation.

Precipitation is a corroſion by ſtrong and corroſive Waters, and that is done when bodies are emerged in corroſive Liquor, and afterward being corroded or diſſolved, either by abſtraction of the Water, or ſome other way, they are repercuſſed into a Calx. Precipitation.

Stratification is a corroſion by corroſive powders. Stratification.

It is thus made, *viz.* when a crucible or other convenient Earthen veſſel is filled with thin plates of Metal and corroſive powders, making *S. S. S.* or lay upon lay, thus; firſt put ſome of the corroſive powder in the bottom of the crucible, then lay in the thin plates of the Metallick body, upon which ſtrew more of the powder, then again lay in more of the plates, and ſo go on till the veſſel be full. Afterward put coals round about, or give it fire of Reverberation, encreaſing the

the fire leiſurely, as the matter requires. It is alſo called — Cementation, of affinity to which is — Commixtion, wherein the body to be corroded is mixed with corroſive powders, and by the adhibition of fire is reduced to a Calx.

Cementation.

Commixtion.

Fumigation is a corroſion of Metal by ſharpe fume or vapour.

Fumigation.

This is done divers ways. In general let it ſuffice to know, that a Metallick body reduced into thin plates, and to be calcined by fume, muſt be ſuſpended either over *Aqua fortis*, Vinegar, or the vapour of melted Lead, or Mercury, or ſuch like ſharp things; as vulgarly they are wont to prepare Ceruſe.

Ignition is calcination by fire.

Ignition.

And it is either Cineſaction or Reverberation.

Cineſaction is ignition, wherein Vegetable and Animal bodies are reduced to aſhes by violent fire.

Cineſaction.

Reverberation is alſo ignition, wherein bodys by fire of flame in a furnace of Reverberation, are calcined.

Reverberation.

Hereunto alſo appertains Deſiccation of the native humidity, as is wont to be in Salt, Vitriol, Allom, and ſuch like.

Deſiccation of the native humidity.

CHAP.

CHAP. IV.

Of Extraction.

EXtraction is a kind of Reſolution, wherein the more ſubtile parts are ſeparated from the more groſs. Extraction generally conſidered.

And is twofold, either generally, or ſpecially, ſo called:

Generally, ſo called, is made duplicitly, as well by aſcenſion and deſcenſion, as by an intermedium.

And that is either dry or humid: the dry is Sublimation, the other is called diſtillation.

Sublimation is an extraction of the more ſubtile dry parts, by fire elevated aloft, and adhering to the veſſel. Sublimation.

It is made, when the matter to be ſublimed is aptly prepared, as it ought to be, *viz.* either by waſhing, or by calcination, parching, cocting, or the like; and afterward either alone, or with other matter permixt, put into an Urinal with a Spherick, or large and broad bottom, ſo as half part of the veſſel only may be filled, and that placed in an aludel [or pan] over a furnace quite above the fire, and unto the veſſel a Blind-head Luted on with good Luting, in the Head muſt be a hole directly over the middle of the inferior veſſel, that the humid Spirits may exhale through the hole. Then muſt fire be gradually adhibited, and when all the humidity hath expired (which may be proved by a piece of glaſs, or a ſmooth plate of Iron, when applyed

ed to the hole, if not at all ſtained with the breathing) the hole of the Alembeck cloſed with Luting, and the fire intended for forcing the Spirits upwards.

Therefore, according to *Geber*, Sublimation is the elevation of a dry matter by fire, with adherency to the ſides of the veſſel; how madly are diſtillation and calcination confounded, and waters which are diſtilled, ſaid to be ſublimed. Moreover it is obſervable, that this Chymical Operation is not a new invention, but it was alſo known to the ancients. For ſo *Cadmia* or Braſs-oar was heretofore prepared, witneſs *Galen*, and *Dioſcorides*; and likewiſe *Pompholyx* and *Spodium*, by the ſame teſtimony.

Diſtillation. Diſtillation is an extraction of the humid parts, extenuate and elevate into fume by heat.

What *Ariſtole* ſaith, *lib.* 4. of Meteors; μιμεῖται ἡ τέχνη τὴν φύσιν, that is, Art imitates nature, is verified in this vulgar Operation of practical Chymiſtry. For as vapours by the Solar rays are drawn up from the Earth into the middle Region of Air, and there condenſed by the coldneſs of that Celeſtial Sphere, fall down again upon the Earth in ſhowers. So the Chymical Artificer, from things exhaleable and vapourable, by the miniſtry of fire, with ſeparation of the thin Spirits from the more groſs parts, and elevation of them unto the cold concaveneſs of the head, extracts their eſſence in form of Liquor. Likewiſe in the humane body * exhalations from the inferior parts are carryed upward into the Airy Region of the Microcoſm, as into an Alembeck, and by the coldneſs there-

* Ἀναθυμιάσεις.

thereof, are condenſed into a phlegmatick and mucoſe Excrement, whence afterward is made a continued diſtillation and defluction thereof into the Noſtrils, Pallate, or other parts of the body. Hence it is, that in dreſſing of Meats we cloſe our Pots with covers, that what vapours are converted into water, may after exhalation be reverted into their own Original. So, when we would keep any prepared meats warm, or being cold, heat them, we cover the diſhes, in which they are with others; whereby the vapours ariſing from them by their cold, incraſſate *Antiperiſtaſis*, fall down again in drops.

Alſo Diſtillation, with reſpect to the diverſity of veſſels wherein it is made (not to mention many other differences) is either right or oblique. It is made by Alembeck, or *per Veſicam*, or elſe by Retort, eſpecially in things containing the more contumacious ſpirits.

Hereto appertains Rectification and Cohobation.

Rectification is a repeated diſtillation of Liquors, for their greater purification and exhalation, yet this is alſo ſometimes performed by Digeſtion. Rectification.

Cohobation is a reiteration of diſtillations, wherein the Liquor diſtilled is reverted upon its own feces, and again thence diſtilled. But this is done with the feces firſt ground, and leiſurely imbibed with the humour, that they may be macerated. Cohobation.

Extraction generally ſo called, which is made by Deſcention, is twofold, *viz.* either hot or cold. The

Diſtillation by deſcenſion hot.

The hot is that wherein the ſubtile parts are ſeparated from the groſs by deſcenſion, with the mediation of fire. Whence it is alſo called diſtillation by deſcent, and is uſed in making of Pitch; when from the heap of Clefts of the Pitch-tree piled together, and cloſed from any breathing places by fire kindled within, Pitch floweth out; as is to be ſeen in *Pliny* and *Mathiolus*, who have exactly deſcribed this Operation.

Cold diſtillation by deſcent.

The cold is that, which by deſcent without fire makes ſeparation of the ſubtile parts from the groſs.

And it is either Filtration or *Deliquium*.

Filtration.

Filtration is, when the aqueous humours by a Separatory or brown-paper wrapt up round, like (or put into) a Tunnel or *Hyppocrates* Sleeve, Linnen Cloath, or ſome ſuch thing, is ſtrained, leaving in the filter or veſſel, the more groſs parts.

Deliquium.

Deliquium is, when impure Calxes, Salts, and ſuch like Liquables, either *per ſe* are put upon a Marble or Glaſs Table inclined; or included in a bag are ſuſpended; that moiſtning by the humid Air, they may let go their pure juice. Yet ſometimes it ſo is, as *per deliquium*, there is no ſeparation of parts made; as when Salts purified, or ſuch like are placed in a cold Cellar or other moiſt place, and by external humidity, which eaſily enters into them, deſcend and fall into a ſubjacent veſſel in Liquor.

Ex-

Extraction which is made by an intermedium, is when the more pure parts of Liquids or dry things moiſtened, are ſeparated from the impure without diſtillation and ſublimation.

Of this there are three kinds, *viz.* Digeſtion, Putrefaction, and Circulation.

Digeſtion is, when things with digeſtive heat, reſembling the heat of natural digeſtion in the Stomach are cocted or ripened. Digeſtion.

For as the Stomach by its own moderate heat digeſteth crude meats received, and by cocting tranſmutes it into Chyle; that, the feces being ſecluded and thruſt out into the Inteſtines, from that ſubſtance by the Liver an extraction of the more benign and more pure parts, may be made; ſo alſo by like temperate heat of any other thing, digeſtion ſeparates the ſubtile from the groſs; what are thick it breaks and attenuates, cocts the crude, mitigates and edulcorates the unſavoury; and ſo elaborates all things, that from things digeſted, a more plentiful Harveſt of eſſence is always to be expected.

The adminiſtration thereof, is Learnedly deſcribed by *Libavius* in this manner. The matter to be digeſted is included in a veſſel like unto the Stomach, every where firmly cloſed; unleſs when with digeſtion evaporation is conjoyned, as for correction of an *Empyreuma* or in coagulation, and ſuch like; for then a ſmall hole in the cover or mouth of the veſſel is left, and a juſt time obſerved, that none of the ſubſtance periſh. Whether it be meer juice or Liquor, the matter is plain: but in Minutal of Herbs, and ſuch like, either the proper juice is to be left, or ſome analogous humour from with-

without is to be added; which notwithstanding is sometimes also in liquors of divers kinds; as when Oils are digested with Spirit of Wine, &c. where is a proneness to putrefaction, and in adding the *Menstruum*, care enough can hardly be taken; (for putrefaction must not be made when we would digest a thing, although digestion may be the way to it) then Salt is to be added; and the vessel so fitted, must be placed in a digestory furnace of competent heat, and there permitted to stand unto the desired end, which is diverse, by reason of the multiplicite use of digestion. As for example: Green Herbs moistned with their own juice, from which, by distillation their Essence is to be extracted, are macerated three days; but the dry moistned with Spirit of wine seven days. Seeds and Aromaticks half a Moneth: Roots for a Moneth if they be dry: Minerals for a philosophick moneth, which is forty days or longer, according to firmness, and the hability of the *Menstruum*. Some are twice macerated, sprinkled with Greek-wine, as sometimes Aromaticks, which, being moistned, are digested to a dryness; afterward pulverisate, are the second time macerated by imbibition. So solidity and rarity also have their difference of time. Distilled Waters set in digestion to the Sun, are rectifyed in half a Moneth, the vessel being firmly closed, and two parts of the vessel ful, and the third empty; and sometimes a third part of the glass is set in sand, which in cold things Artificers command to be done, but with great caution. Yet hot waters and Oils are rectifyed in cold sand, also a third part of the vessel buryed in it,

A Philosophick Moneth.

it, &c. in a * moiſt Cellar for a moneth; likewiſe the other humour to be added, muſt be ſuch as may help digeſtion without corruption of the ſubſtance.

* Vapid or muſty.

And here if the humour be alienate, it is ſeparated by the aforeſaid hole; but if otherwiſe, and it be familiar, or elſe alterable into the nature of the digeſted, it is left. In Denſe things it is more ſharp, and ſometimes corroſive, as Vinegar, Spirit of wine, ſtrong wine, &c. In others gentle, as diſtilled Rain-water, Roſe-water, &c. ſometimes Oil of the ſame kind. In the interim, what are of another Nature, and by digeſtion recede, are ſeparated.

But digeſtion is not only accompanyed with diſtillations or extractions, but alſo with rectification, coagulation, fixation, edulcoration of Calxes prepared by *Aqua fortis*; and is calle[d] Maceration: becauſe it alſo hath power of penetrating, of opening the compactneſs of things, and of ſeparating impurities.

Maceration.

Putrefaction is, when a mixt body through natural putridneſs, by humour overcoming dryneſs and external heat operating more ſtrongly than internaly, is reſolved to an Eſſence, apt to be extracted and ſegregated from its hetrogeneal parts.

Putrefaction.

The way of performing it is thus: What is to be putrefied, muſt be duly prepared, and ſo put into a Cucurbit of glaſs, if it either be dry or abound not with humidity ſufficient for putrefaction, a certain ὄχημα, [that is, a Vehicle] or *Menſtruum* (ſo generally from the moneth of putrefaction, e-

very Liquor is called, which is uſed for extraction of things, if it either be of its own kind, or to it analogous, or a Water) convenient muſt be poured on, which by its own exceſs may take away the dryneſs of the mixt body, open the mixture, draw the outgoing Eſſence to it ſelf, and conſerve it intire and uncorrupt, untill it be all extracted: and leaſt the heat with its own humidity ſhould expire, the veſſel muſt be ſealed with *Hermes* Seal: afterward in Horſe-dung, or like heat, it muſt be conſerved, and that heat continued to the end of the time prefixed.

The property of putrefaction. The property of Putrefaction is, to change both the colours, odours, and taſts of things, and their old nature being deſtroyed, to generate a new.

Circulation. Circulation is of a Liquor depurated from Elements in a Pelican, by various Circumvolutations or Rotations, by which the impurities ſetling downward are removed, and ſo it is converted or exalted to a more excellent State.

It is thus performed: The Liquor to be exalted, is included in a Pelican or Circulatory veſſel, four or five parts thereof remaining empty; and ſo it is placed in *Balneum*, or Dung, as deep as the Liquor riſeth within the Glaſs, or a little lower, ſo as the ſuperiour empty parts of the veſſel may ſtand in the cold Air; that from the bottom and the ſides, an attenuation may be made by heat; but from the upper parts coagulation by cold; and ſo the ſaid veſſel muſt be kept in moderate and continued heat, untill the Artiſt come to his deſired end, and the Faces totally reſide in the bottom.

In

In this place it ſeems not improper to annex Fermentation; although ſometimes by it is not made ſo conſpicuous a ſegregation of the ſalubrious, from the more groſs parts; as (rather) a diſpoſition for extracting the moſt noble Eſſence. Fermentation.

Yet it is the Exaltation of a thing in ſubſtance, by which, digeſtion mediating, the Agent heat prevails, and turns the Patient into its own Nature.

Moreover, what are fermented, are either Liquid or Solid. What are Liquid, are ſuch ſimply, as Water and Wine, or thick and ſoft, as honey and * *Sapa*.

Liquids which are ſimply ſuch, if they be alſo hot, *per ſe* are fermented, as Wine, Perry, & Sider. But what are cold? as the expreſt juices of cold things, have need of the addition of ſome other external, as feces of Wine, dregs of Beer or Ale, Salt, or any like acidneſs, for accelerating ebullition and fermentation. The thick and ſoft may be in the following manner fermented. For example: To ten pound of honey adde fifty pound of water; Let them ſtand in moderate heat for one day natural, then with gentle fire boil the whole, and ſcum it; let a third part exhale, or while the Liquor is hot put in a new-laid-egg, which, if it ſhall float above the Liquor, is a ſign of perfect decoction, Then the Liquor removed from the fire muſt be ſtrained hot through a double Cloath, and in a ſutable Veſſel placed in the Sun; two drams of Salt of Tartar, or common Salt being added, or ℥j of any acidity put in. And ſo it muſt Wine boiled to a conſiſtency. *Hydromel.*

boil or ferment for forty days or thereabout, until the Liquor be clear, and have an odour like Wine. Then muſt the veſſel be cloſed, and the *Hydromel* reſerved in a Cellar for uſe.

What are ſolid and hard, as Seeds, Wheat, Fennel, Aniſe, Juniper-berrys, Aromaticks, *&c.* muſt be bruiſed; and water be poured on them, and their proper Salt, or what is to them analogous, or ſome acidity or feces of Beer or Wine; ſo as to a hogs-head of the matter to be fermented, a pint of feces be added.

But what are moſt hard, as Stones, muſt firſt be calcined, and afterward fermented; as in the following Treatiſe, touching Corals and Lead, ſhall be ſpoken.

Extraction ſpecially ſo called.

Extraction ſpecially ſo called, is when from the mixt body, the more ſubtile, and more noble parts drawn but by any *Menſtruum*, are extracted from the Elementary groſneſs remaining in the bottom; and by diſtillation or evaporation are coagulated to the conſiſtency of Syrup or *Sapa*. It is thus made: When a matter having Tincture is infuſed in a convenient *Menſtruum*, and the veſſel cloſe ſhut, placed in digeſtion: Afterward the coloured *Menſtruum*, by inclination ſeparated; and other freſh *Menſtruum* poured on, and the veſſel cloſed, again ſet to digeſt, and the ſame labour ſo oft repeated, as till the *Menſtruum* be no more tinged. Then are all the evacuations filtred, circulated, and coagulated with the *Menſtruum*, to an oleaginous conſiſtency, or elſe ſometimes to a dryneſs, according to the nature of the matter, or as the intended uſe ſhall require.

CHAP.

CHAP. V.

Of Coagulation.

HEtherto we have ſpoke of Solution, and its Species, now follows Coagulation.

Coagulation is another of the principal Operations of the Spagyrick Science; wherein ſoft and Liquid things are forced by privation of humidity, from a thin and fluid conſiſtency into a ſolid. Coagulation.

This, although it almoſt inſeparably adhere to the Species of Solution, as Precipitation, Amalgamation, Sublimation, Diſtillation, *&c.* Yet is it peculiarly.

Firſt, by exhalation, wherein the humour expires from the coagulable matter.

Secondly, by decoction, wherein Liquid things are cocted to a certain ſolid conſiſtency.

Thirdly, by Congelation, as in Cellars, when Chryſtals by cold are produced.

Fourthly, by Fixation, wherein things volatile and flying the fire, are taught by uſe to remain fixed therein; which is done either by addition of a fixed Medicine, or by mixtures or ſublimations, Cements, and ſuch like, according to the nature of the matter.

CHAP. VI.

Of Lutation.

NOw for order ſake, it is expedient we ſhould ſpeak of Furnaces, Veſſels, and various Chymical Utenſils, as alſo their divers Regimens of fire. But theſe are rather learned by ocular inſpection, than by precepts and rules. Therefore for brevity ſake, we ſhall omit them, and only ſpeak a few things touching the Lutaments and Conglutination of *Sapient* Artificers.

For building Furnaces.

Take fat Earth, of what colour ſoever it be, and mix, and work it together with ſand, Horſe-dung, and Salt-water.

For Coating Retorts.

(Although I am not wont to Coat either Glaſs or Earthen Retorts, whether I diſtill by ſand, or by a naked fire, or by a cloſe Reverberatory, or by fire of ſuppreſſion.) Take Potters-clay, Horſe-dung waſht and dry'd, flour of Tiles, and Scales of Iron, mix, and work theſe ſtrongly together with common water.

Luting of Sapience for cloſing in the moſt Subtile Spirits.

Make Luting of Calx-*viva*, and the white of Eggs reduced to water, and ſpeedily apply the ſame, becauſe it eaſily drys.

For

For conſolidating crackt and broken Glaſſes.

Take Bole-armenack, Minium, Ceruſe, of each equal parts, reduce them to a moſt ſubtile powder, and temper it with Linſeed Oil, or liquid Varniſh.

For Luting Glaſſes together.

I unto this day have with good ſucceſs uſed Hoggs or Ox-bladders, for luting an Alembeck with its Cucurbit, as well in diſtillation of waters, as of ſharp and penetrating Spirits.

For Luting the noſe of the Alembeck with the Recipient.

Take of Wax ℥j. Roſin, Colophony, of each ʒj. melt them together in an earthen pan; unto theſe adde a little Oil Olive, ſtirring them with a ſtick, that the whole may be incorparated; then removing the pan from the fire, work the whole well together with your hands.

For Luting Retorts with their Receivers, in diſtillation of ſharp Spirits.

The Luting for coating Retorts work together with Salt water, or mix it with Colophony pulveriſate, and apply it moiſt.

The End of the Firſt Book.

TYROCINIUM CHYMICUM:

OR,

CHYMICAL ESSAYS.

Book the Second.

Proemium. THE former Book treats of Solution and Coagulation in general; now in the following Books we intend to treat of the effects of these Operations. Although in Specie, how the compactness of all mixt bodies are to be opened, ought to be declared; the same we should have endeavoured to perform, had we undertaken to write an entire System, and not a *Tyrocinium* of Chymistry. There are effects, or, as by some they are called, Chymical Species of Solution and Coagulation, which are either liquid, or soft, or hard. To the liquid may be referr'd, the various kinds of *Aqua fortis*, Spirits, Vinegar, Oils, and Liquid Tinctures, extracted from Flowers, Herbs, Roots, Rinds, Seeds, Woods, &c. To the soft Balsoms, various Extracts, soft Tinctures

&tures. To the Hard, Salts, Flores, Magiſterys Calxes, dry Tinctures of *Crocus*.

CHAP. I.

Before we come to ſpeak of the forms of Liquors to be prepared, which are, for the moſt part, made by diſtillation; certain general Rules ſeem needful to be inſerted, of which this is

The Firſt.

Rules neceſſary for the Doctrine of diſtillation.

VEſſels in which diſtillation is made, muſt not be of Lead. For they infect Liquors with a malignant quality, render them vomitive, change their native taſte, and ſometimes themſelves are corroded by ſharp vapours expiring from the matter to be diſtilled. And if *Galen*, and other wiſe Phyſicians, condemned the waters which flow through Leaden Pipes, by reaſon of the malignity (much infecting the internal parts) which they thence contract. What may be judged of waters diſtilled in Leaden Veſſels? Since it is often manifeſt (eſpecially when diſtilled Liquors of this kind have ſtood unmoved for certain days) that Ceruſe of Lead raſed off in diſtillation from the Leaden Alembeck, is found in the bottom of the veſſel; eſpecially if to prove the ſame, you ſhall pour in a drop or two of Spirit of Vitriol.

And what is ſaid of Leaden veſſels, for like reaſon muſt be underſtood of Tin, Braſs, and Iron; unleſs diſtillation be made in a Braſs Veſica, where what are diſtilled ſoon flow out. The

The Second.

Glaſſes, by how much the higher they be, ſo much the better are they. For ſo one diſtillation is better than three rectifications. Let the Cucurbits [or Glaſs bodys] for the moſt part be two Cubits high.

The Third.

In every diſtillation, veſſels muſt not be two full; you will more ſafely operate, if Cucurbits be filled but one fourth part, Retorts about half; but the Braſs Veſica may be three parts full, and but one remaining empty.

The Fourth.

Things flatulent, as Wax, Roſin, and the like; as alſo thoſe which eaſily boil, muſt be put to diſtil in a leſs quantity, and in greater veſſels, and indeed muſt be mixed with Salt, Sand, or ſuch like.

The Fifth.

Diſtillation by a *Balneum*, is proper for things not too ſtrongly compacted. Yet in Herbs, eſpecially thoſe that are hot, as in Worm-wood, Sage, Roſemary, *&c.* great heed muſt be taken, that we uſe not too gentle heat, leaſt we draw out not ſo much of the eſſence, as of the unprofitable phlegm. But in Lettice, Endive, and ſuch like of a more thin ſubſtance, a moderate heat muſt be adhibited; and ſometimes a Baln of dew [or vapour only] which neither

neither impresseth an *Empyreuma*, nor dissipates the more thin airy parts, may be sufficient.

The Sixth.

Distillation by Ashes or Sand, agrees with things of a more solid consistency, as Seeds, Woods, Roots, *&c.*

The Seventh.

By a Brass Vesica, things thin are not only distilled, but others also which are more firmly compacted; yet in their *Menstruum* first macerated.

The Eighth.

Distillation by Retort, doth not only extract the more weighty Spirits of Minerals, but also things more soft, as Woods, Seeds, Roots, Gums, Rosins, *&c.* Waters, and Oils.

The Ninth.

When fresh and juicy Herbs are to be distilled, they must be bruised, and the juice expressed, and then by heat of Baln. distilled in a high Cucurbit.

The Tenth.

Herbs either of their own nature dry, or dryed by time, must be bruised and moistned with common water, or their own proper water, May-dew, or Wine. And of the *Menstruum* must be so great a quantity, as may be sufficient for maceration; but if more be poured on, the whole quantity must not be

be abſtracted. Maceration being made according to diſcretion, diſtillation muſt be made by a Baln. or if you ſhall diſtil *per* Veſicam, add to every one pound of herbs, ſix pound of water, and diſtil according to Art.

The Eleventh.

In the ſame manner *per* Veſicam, whatſoever is Aromatick, whether Roots, or Rinds, Woods, Seeds, or Leaves, or Flowers are diſtilled, and Oil and water come forth together.

The Twelfth.

There are ſome which require a vehement fire; yet ſuch muſt not be too violently urged, leaſt, in ſo doing, their nature be wholly corrupted.

The Thirteenth.

Great care muſt be taken, that the Luting wherewith the diſtillatory veſſels are conglutinated, do no where admit of expiration, leaſt the liquor be defiled with an extraneous quality; eſpecially when a more violent fire is to be adhibited.

The Fourteenth.

The diſtillation of things Acid, hath this property, that the more ignoble part always comes forth firſt, and the more noble laſt. Wherefore in Rectification of them, what firſt comes forth is to be ſeparated, as phlegm.

The Fifteenth.

If waters ſmell of an *Empyreuma*, or ſhall be very much contaminated with a certain fiery heat diſperſed through their leaſt parts; that is corrected if the Glaſſes containing them, be ſet in a cold and moiſt place.

The Sixteenth.

When Liquors diſtilled *per B. M.* are to be rectified by Inſolation; the Glaſſes wherein they are put muſt be but half full, or three parts filled at moſt; and the Membranes, with which they are wont to be covered, muſt be pricked with a needle; that through thoſe Spiracles, the unprofitable flegm may exhale.

The Seventeenth.

Diſtillation muſt ſo long be continued, as untill the Liquor come forth without any ſavour of the matter impoſited.

CHAP. II.

Of Waters from Flowers, Herbs, Roots, Rinds, Seeds, Woods.

Water of Roſes.

THis is prepared divers ways. Some take of Roſes a convenient quantity, and theſe digeſted three days in Baln. they diſtil with the vapour of hot water.

Others

Others, without preceding digeſtion draw forth a water from them put into an Alembeck. Others alſo diſtil them by aſhes; where there is need of the greateſt Caution and circumſpection, leaſt the diſtilled Liquor be infected with an *Empyreuma*. And there are others, who for lucre of gain, more than intending the health of Men, take the Roſes whole as they are gathered, with a great quantity of water, and diſtil them by a Braſs Veſica: and from thirty pound of Roſes, they extract a hundred pound of ſaleable water, having an indifferent good odour. Others diſtil the flowers bruiſed by gentle heat of Baln. without any *Menſtruum*, or at moſt, only ſo much as will ſerve to moiſten them: and for the more expeditious procuring of a cooling virtue, in one diſtillation they firſt moiſten them, either with common water, or old Roſe-water; or elſe for enduring a fragrant and comforting virtue, they uſe more infuſions in diſtilled water. Which way, we follow in preparing it; only diſtinguiſhing between the white, and the fleſh coloured. For from them, that the greater cooling virtue may be obtained; we beat them in a Marble Mortar, having firſt moiſtned them with a little Rain water, then with a Preſs, expreſs the juice, and ſo diſtil it. The fleſh coloured, bruiſed, without any moiſtning, are put into a great glaſs veſſel ſet in a Cellar; and after three days, the juice is expreſt and diſtilled. This is the moſt fragrant water, and will keep the fragrancy of its odour many years. Some upon the preſſings of theſe, pour clean and pure water, and ſo macerated for eight days, they diſtil it either in Baln. or a braſs Veſica; and this water ſo diſtilled in virtue and efficacy, is not inferior to the common vendible Roſe-water.

Burn-

Burning Water of Roſes.

As from all other things, eſpecially ſuch as are Alimentoſe, as flagrant and fragrant water, by the benefit of fermentation, may be extracted; ſo alſo from Roſes, which, by common cenſure are cold.

Take Roſes gathered in a ſerene time, when they are wholly deſtitute of any dewy moiſture; beat theſe moſt accurately, and put them in a glaſs Cucurbit, which afterward being firmly cloſed, place in a Cellar. As ſoon as the Matter ſeems to ſmell of any acidity, take of the ſame bruiſed flowers, what quantity you pleaſe, and thence diſtil a Liquor *per* Baln. the water thence extracted, pour upon another part of the Roſes; and again diſtil it after the ſame manner, proceeding until all the quantity of fermented Roſes hath paſſed by Alembeck; the feces, which are wont to remain in the bottom, being every time ſeparated. Afterward, all the water drawn from the Roſes, diſtil by Baln. and abſtract about a twelfth part at leaſt, and it if you pleaſe rectifie. So will you have a moſt grateful, and moſt odoriferous water; and which will as readily take flame, as Spirit of wine.

Water of Succory.

Take of the Herbs, and Roots of Succory gathered in the middle of *May*, twelve pound, bruiſe them, or cut them very ſmall, pour on them of common water twenty pound, and having macerated them three days; by a Veſica diſtil at leaſt eight pound.

Fennel Water.

℞. Of Fennel-ſeeds groſly beaten four pound, of common water twenty four pound, add of Salt of Tartar or common Salt ℥ j. macerate theſe in a hot place. Afterward diſtil them by a Braſs Veſica, with its Refrigeratory; So the water with the Oil will paſs out together, which from it muſt be ſeparated.

Cinnamen Water.

℞. Of the beſt Cinnamon groſly bruiſed; on which pour of Roſe-water, and of White-wine, of each three pound, macerate them in heat congruous to the heat of dung; then make diſtillation *per* Baln. ſeparating the firſt water, which is the beſt; and alſo receiving the ſecond apart; and ſo likewiſe the third. The ſecond may be uſed inſtead of a *Menſtruum* for maceration. The third is unprofitable phlegm.

Acid Water of Oak, Juniper, Guaiacum, and Box.

℞. The ſawings of Oak, or ſmall ſplinters, or ſhavings of Juniper and Guaiacum, or ſhavings of Box: diſtil them in a Retort unto a dryneſs: afterward ſeparate the Oil from the water through a brown paper. Rectifie the water in ſand upon Colcothar, or Sea-Salt, or its own proper aſhes: then by diſtillation ſeparate the phlegm from the acid Liquor: Laſtly, reſerve a third part of the moſt pure Liquor, or there about. It is uſeful in diſſol-

ving Corals and Pearls, and in extracting their Tinctures.

Compounded Water of Cinnamon.

Macerate and distil Cinnamon, as above; adding the Roots of Dittany of Crete, Angelica, of each ℥ij. In this water dissolve as much white Sugar, as you can, and digest the whole for one day natural: afterward segregate the superfluous water by distillation; then adde of *Aqua vitæ* rectifyed ℥j. and diligently mix them. It is of admirable virtue in the Pest, and in a difficult Birth.

CHAP. III.

Of sundry kinds of Aqua fortis.

STrong Waters, which are also called Caustick, Chrysulcæ, Separatory, and Stygian Waters, are confected by violent fire, of Atramentum, Sutorium, Salt Nitre, Salt-armoniack, Stibium, sublimate Mercury, Allom, Cinnabar, *&c.* Of which, that which obtains the greatest caustick, and corrosive force of all, is called *Aqua Stygia*; but that which dissolves gold, *Aqua Regia.*

Common Aqua fortis.

℞. Vitriol dryed two pound, Salt-peter purified one pound, grind them together, and mix them; then put them into a Retort very well coated; which place in a Furnace of Reverberation, and applying a capacious Receiver, distil by fire gra-

gradually augmented, for twenty four hours. When white and cloudy Spirits are diſſipated in the Recipient, the diſtillation is ended; after which ſuffer all to cool by degrees. The water taken out, clarifie with Silver in this manner: take a fourth part of the Liquor diſtilled, in which project of pure ſilver ʒj. and diſſolve the ſame over a fire; pour out the Solution on the other three parts, and they will wax milky; let the water ſettle, and pour off the clear. If you would have it be *Aqua Regia* in ʒiiij. of this common water, diſſolve ʒj. of Salt Armoniack, or common Salt dryed; and with it you may diſſolve gold.

A perpetual Aqua fortis, *and the way of making* Cinnabar.

Diſſolve Mercury in *Aqua fortis*, add of Sulphur an equal part; diſtil theſe by Retort, and you will have a water more potent than before, and in the neck of the Retort Cinnabar.

Philoſophick Water, or Aqua Regia.

℞. Of Salt Nitre purified, and Salt armoniack, of each ʒij. grind, and mix them well together; and in a large Retort, with a capacious Receiver annexed, the junctures gently luted, make diſtillation in aſhes, continuing the fire until all the fumes with great violence be come forth; and no more drops will fall from the Retort. Then take out the Retort while it is hot, and put in the ſame quantity of the aboveſaid matter, and mix it with the *Caput-mortuum*, diſtilling it as above.

CHAP. IV.

Of Spirits.

SPirits participate partly of water, and partly of fire; and as they are more aqueous, or more oleaginous; ſo are they called either water or Oil. Yet ſuch, as are extracted from Minerals, are for the moſt part called Oils.

Among the Spirits of Animals, the ſpirit of humane bloud excels; of Vegetables, ſpirit of Wine; and of Minerals, ſpirit of Vitriol.

Spirit of Wine.

Digeſt Rich wine in dung, or like heat, in Circulatory veſſels of an equal largeneſs for eight or ten days; afterward the veſſels cooled, pour it out into high Cucurbits, on which ſet Alembecks, with Recipients annexed, the junctures being firmly cloſed with Hogs or Ox-bladders, make diſtillation in Baln. according to Art. Firſt the ſpirit comes forth, which keep apart by changing the Receivers; then urge the phlegm till the feces remain thick like liquid honey. The ſame feces diſtil by Retort, adminiſtring fire gradually, and you ſhall receive a fat Oil. Then from the *Caput-mortuum*, by reverting the phlegm upon it, and by digeſting, filtring, and coagulating, you may extract a Salt. If you deſire the ſpirit of wine more excellent, rectifie it by often repeated diſtillations.

Spirit.

Oil.

Salt.

Spirit

Spirit of Tartar.

℞. Of pure white Tartar five pound, put it in a glaſs Retort, to which, when placed in aſhes with a large Receiver annexed, adminiſter fire gradually; firſt the ſpirit comes forth, afterward the Oil; both which muſt be rectifyed by addition of Salt of Tartar, and afterward ſeparated each from other.

It is a famous aperitive; wherefore in retention of the Menſtrues, the Paralyſie, Jaundies, and ſuch like affects, it is wonderfully efficacious. It is alſo uſed in the Dropſie, with other hydragoge waters. In the Leproſie, Indian diſeaſe, Pleuriſie, and Quinſey, it is alſo exhibited. The doſe from ℈j. to ℈ij. in convenient Liquors.

Spirit of Turpentine.

℞. Of clear Turpentine, what quantity you pleaſe; put it into a Braſs Veſica (with its Refrigeratory) almoſt filled with water. So a ſpirit is drawn forth, which will ſwim above the water; and by *B. M.* it may be rectifyed. Its uſe in Medicine is manifold. The Cough, Phtiſick it cures; peſtilential venoms it reſiſts; it clears the ſtomach of ſordid and viſcous ſtoppages: it maketh Urine ſweet as a Violet; it expels the Stone, and gravel, and heals the Strangury, and Ulcers of the bladder: it opens, and comforts the nervous parts; heats the Spermatick veſſels, and excites Venus: diſſolves coagulated bloud, purifies the womb, and in ſuffocation of the Matrix is exceeding profitable. Externally in contuſions, it is of admirable uſe, and exceeding beneficial.

Spirit of Sulphur.

Under a Glass Campane place an earthen vessel with Sulphur, which set on fire. The inferiour vessel must be so fitted to the Campane; that the ascending fumes may not suffocate the flame, but carryed freely upward into the head, may there be condensed into Liquor, and so fall into a vessel apt to receive the same. From one pound of Sulphur, may you have ℥j. of spirit, of so great efficacy, as *Leonardus Fieravant* said he could never sufficiently admire the vertue thereof, inwardly exhibited into the body. It may be given with appropriate waters, or Syrups to 4. 5. or 6. drops. And be mixed with Electuaries and Pills, as well in hot as cold distempers. Externally also it is profitable for dealbation of the Teeth: for Ulcers in *Lues-venerea* of the jaws; Warts and Fistula's of the Fundament, and all other members. It is also called Oil, but improperly.

Κατακρηστικῶς.

Spirit of Vitriol.

There are three kinds of Vitriol; the Green, White, and Blew, participating of the nature of Salts, Alloms, and Sulphurs, some more, and some less. The first indeed participates more of Salt, the second of Allom, and the third of Sulphur; and they consist of an aqueous, earthy, and middle nature, the aqueous and earthy, as *Ripley* witnesseth in his Pupil of Alchimy, cannot be separated from their extremities, but by the mediation of Mercury; which, as *Geber* affirms, retains what is of its own

own nature, rejecting and expoſing to the fire, what is not ſo. The middle perſpicuous ſubſtance exalted by ſublimation, into a Snow-like candor, occultly in it ſelf contains a ſulphurious ſeed, moſt Red, like a ſmall worm. Whence in *Turba* it is ſaid, Philoſophers have admired, that a redneſs ſhould be exiſtant in ſo great whiteneſs. Of this Sulphur *Gebar* thus ſpeaketh; in *cap.* 28. *Summ.* By the moſt high GOD, that thing illuminates and rectifies all bodies, becauſe it is Allom, and Tincture. This is that *Aqua vitæ*, the dry water which wetteth not the hands, the congealed water, the animate Salt; touching which *Raymund Lully* after *Alphidius* ſaith, ſalt is no other than fire; nor fire any other than ſulphur, nor ſulphur other than Argent-*vive*, reduced into that precious, celeſtial, incorruptible ſubſtance, which we call our ſtone. Whence one to the Letters *VITRIOLUM* thus alludes. *Viſitando Interiora Terræ Rectificando, Invenies Occultum Lapidem Veram Medicinam*: that is, viſiting the interiour parts of the earth, by rectifying you may find the occult ſtone, the true Medicine.

Moreover, among Artiſts it is controverted, whether among the various kinds of Vitriol, either that of Cyprus, the Romane, or Hungarick, be the better, and more noble. The Cyprian and Romane may well enough be ſuſpected, becauſe they are for the moſt part adulterate and ſophiſticate, being various, *viz.* of divers colours, forms, and virtues. And the Hungarick, ſuch as by French and German Merchants is brought unto us, is a certain blew, perſpicuous, and ſometimes a greeniſh Vitriol, which they ſell for genuine, and as brought from *Pannonia*, but they lie impudently. For when I with great travel went to thoſe parts, with inten-

tion to go into the Mines of Gold and Silver, that I might by * proper experience have more perfect notice of Metals and Minerals; the Illustrious and noble Lord of *Bloenstain*, general Prefect of the Mines, of that Kingdom of *Hungary*, through his aboundant courtesie and humanity, did certainly affirm to me, that there were two kinds of Vitriol there; whereof one was white, and very aluminose, of which they make Chrysule-waters, but the other blew, and far more excellent; yet the Minera of this, although much better than the other, was not dug; because no Merchants judged it worth their time, to buy such Vitriol, and transport it to other Lands. The same is likewise affirmed of Antimony, which is found in aboundance in the Gold Mines.

* Αὐτοψία.

Ungarick Antimony genuine, is seldom brought into other Regions.

That Vitriol, of right, and deservedly, ought to be censured most excellent, which by the benefit of water is made of *Venus*, and thence extracted, as is mentioned hear-after. To this, the blew aforesaid is somewhat inferiour; for this contains in it self more of *Sol*; transmutes more of *Mars* into *Venus*; and longer sustains the *Examen* of fire, before it gives forth its last spirits, from what place soever it is brought.

Therefore of this Vitriol ℞. twelve pound, calcine it in an earthen vessel with moderate fire, untill all its humidity recede. The vessel cooled, reduce the Mass, which will be about seven pound, to powder very fine, and with one pound or thereabouts of the same Test [where it was calcined] pulverisate, put it into a Retort firmly coated; which must be so large, as at least a third part there-

of

of may be empty. Then place it in a Reverberatory furnace, apply a large Recipient, with a ſhort neck likewiſe coated, and diligently cloſe the juncture of the Retort with the Receiver, with Salt Luting. Then above the Retort place a broad cover of earth of one foot high, and quadrangularly perforate in the top [or upper part] being made exactly to cloſe the mouth of the furnace, of what form ſoever it be, whether ſquare or round, exactly fitted in altitude convenient, and to cloſe or ſhut in the mouth of the furnace equally on every ſide; that the vacant place between the Retort and the cover may be filled with coals. Which being done, make a quadrangular draught with four pieces of Tile, above the ſquare hole of the cover, that the flame by help of ſuch a vehicle, may, when time ſerves, more freely aſcend. The Orifice of the draught, as alſo the furnace door and aſh hole, muſt be ſo cloſed, as for the firſt four hours, the coals in the furnace may but juſt burn, without being extinguiſhed; by which the Retort being leiſurely and ſucceſſively heated, then for the following four hours, the heat may be encreaſed, by gradually, and by little and little every hour opening the holes above and below, until the flame begin to break out in the ſuperiour part, and the Retort wax hot all over, the aſh hole and draught being altogether open, and no way ſtopped; the fire muſt be intended eighteen or twenty hours, untill all the ſpirits be come forth. After two days, moiſten the Salt Luting, wherewith the Retort and Recipient were joyned, with a wet cloath keept on for an hour, becauſe it will be ſo very hard, as without moiſtning it cannot be removed without endangering the Glaſſes; then may you ſafely take off the Receiver. Which being done, by diſtillation in

Baln.

Baln. or a gentle heat in aſhes, ſeparate the phlegm from the ſpirit. There are ſome, who after ſeparation of the phlegm, do rectifie the ſpirit in ſand upon Corals beaten ſmall.

This ſpirit, in burning Fevers mixt with appropriate waters, conveniently cools; it quenches thirſt, reſiſts the putrefaction of humours; it operates by Urine and Sweat, conſumes phlegm, breaks tough and viſcous homours, reſtores languiſhed appetite, and excellently tingeth juices of Roſes, Violets, and other flowers.

Spirit of Nitre.

Nitre or Salt-peter muſt be mixed with three parts of common *Bolus*, and diſtilled by Retort, the ſpace of ten or twelve hours. Of one pound of Salt-peter, you may have a pound of Spirit, if you rightly operate.

This Spirit is the true Balſamick fire of nature, and in the Cholick, Pleuriſie, and Quinſey, is very beneficial.

Burning Spirit of Saturn.

Calx of Saturn or Minium, is infuſed in diſtilled Vinegar, or elſe the phlegm thereof: afterward it is digeſted for one day natural, being often ſtirred, that it Chryſtallize not in the bottom of the veſſel, the *Menſtruum* is poured off, and other *Menſtruum* poured on, until all the Saltneſs be abſtracted. The evacuations are filtred, and two parts or thereabout vapoured away; the third remaining part ſet in a cold place to Chryſtallize; the Chryſtals are ſeparated, and diſſolved in freſh Vinegar; filtred, and

and often as above coagulated, untill they be ſufficiently impregnated with the Salt of Vinegar, Armoniack, as with proper ferment. They are digeſted for a Moneth with ſuch heat in Baln. as they may continually be reſolved, like Oil into Liquor. Afterward they are diſtilled by Retort in ſand, obſerving degrees of fire, into a large capacious Receiver annexed; which if not very exactly luted on with the Retort, ſo great a fragrancy (filling the whole Laboratory) will be loſt, as I doubt not but if the odours of all odorate Vegetables were gathered together, and mixed, it would far exceed them. After diſtillation, when all is cooled, you will find a *Caput-mortuum* very black, and of no value. From the Liquor come forth you ſhall ſeparate a yellow Oil ſupernatant; and an Oil Red as bloud ſetling to the bottom. The phlegm by reiterated diſtillations, being ſeparated from the burning water, you ſhall keep the moſt fragrant ſpirit of Saturn, as a moſt precious Balſom for various diſeaſes, profitably to be exhibited, as well internally, as externally.

Moreover, a fragrant Spirit of this kind may by Chymical Art be extracted, not from Saturn only, but alſo from all other Metals, by mediation of that viſcous Mineral water, which, by the benefit of Vulcan only, without the addition of any extraneous thing, in a moſt ſhort ſpace of time is prepared. Of which *Rhodianus*, in the Treatiſe of three words, ſaith, That fumous, aqueous, and adultive Spirit, is changed into a moſt noble body, and flies not any more from the fire, but flows like Oil, *&c.* For it receives all the qualities of that Metal, with which, by the induſtry of a prudent Artificer, it is mixed, as alſo the odour, colour, and taſte, with conſerva-

tion

tion of its vegetate faculty. And as *Rhasis* saith: As it is changed, it changeth. Whence it is apparent, how basely, ignorant, vulgar Misochymists are, who atribute, odours, tasts, and other medicinal virtues to vegetables only, and esteem Metallicks as destructive to the humane body, and worthy to be shunned, more than a Dog or Snake.

CHAP. V.

Of Vinegar.

Distilled Vinegar.

VInegar without digestion, is distilled in the same manner, as Spirit of Wine: only that the phlegm, as in all other sharp things, comes forth first, and the spirit last. Oil, and Salt, by like reason as is said in Wine, are thence extracted.

Vinegar Alkalisate.

Upon Vinegar distilled to the consistency of Liquid honey, pour so much common water, as may stand above it six, seven, or eight inches, digest it in *Balneum* for two days: then set it in a cold place to Chrystalize. Remove from them the water by inclination, and pour on other until all the oleaginy recede. Then must the Chrystals be often dissolved in boiling water, and coagulated in a cold place, that they may be rendred altogether transparent, and on them poured vinegar four times distilled, and purged from all its phlegm, so as to one pound of Chrystals, be added four pound of Vinegar. Which being

being done the whole muſt be diſtilled by Retort in ſand, adminiſtring toward the end, a fire ſufficiently ſtrong. The diſtillation finiſhed, calcine the feces, and extract a fixed Salt; then rectifie the vinegar with its eſſential animate Salt, diſtilling it with a ſtrong fire from the fixed Salt, and repouring, what is diſtilled off, upon the remaining Salt, until all the Salt ſhall have paſſed by Alembeck. Then twice diſtil this vinegar impregnated with this its own Salt in a boiling Baln. that being done, keep the vinegar, thus rendred moſt potent, for calcining the moſt hard bodies of Stones and Chryſtals.

CHAP. VI.

of Oils.

OIl expreſt from Olives, is moſt properly ſo called, becauſe it participates of every exceeding quality; but others are only ſimilitudinarily ſo named.

All Oils are between an airy and fiery nature: and by how much the more ſharp they are, ſo much the more fiery; and the leſs ſharp are ſaid to be, the more Æthereal and airy.

Oil of the Yolks of Eggs.

Fry the Yolks broke in a Frying-pan, with temperate heat, until they wax Red, and ſend forth Oil; keeping them continually moving with a ſtick, that they burn not. Then expreſs the Oil hot, and with a great quantity of diſtilled water, digeſt it for a Moneth in Baln. Some take the Yolks ſo fryed, and

and incloſing them in cloath moiſtned Oil of ſweet Almonds, preſs out the Oil with with a Preſs.

Mathiolus writing to *Dioſcorides*, commends this Oil as uſeful for cleanſing, and removing roughneſs of the Skin, and clefts of the lips, hands, and feet; and againſt dolours of Ulcers, of the joints, and all nervous places. It is likewiſe profitable in ſcaldings or burnings by fire, and in membranes of the Brain, malignant Ulcers it cicatriſeth, and generates hairs.

Oil of Sage.

Take a great quantity of Sage, and ſet it in the ſhade two or three weeks; afterward diſtil it by a Refrigeratory, and receive the water (which you may rectifie) and the Oil. Which is profitable in all diſeaſes of the Nerves: in the Paralyſie, Apoplexy, Convulſion, and ſuch like.

Oil of Wax.

Melt wax with a gentle fire, and let it ſtand ſo long melted, as till from it no more bubles riſe. Then removing it from the fire, mix it with double its own weight of Salt decrepitate, and diſtil it by Retort with gentle heat. From one pound of wax, you may extract ℥xij. of Oil.

It reſolves, attenuates, penetrates, mollifies, and diſcuſſes; wherefore it is profitable in hard impoſthums, and cold tumors. It heals chops in the paps of womens breaſts, and mitigates the dolours of them. Alſo it conſolidates freſh wounds, if therewith they be twice a day anointed. It is beneficial in burns, if mixed with oil of eggs.

Oil

Oil of Turpentine.

℞. The thick ſubſtance remaining after diſtillation of ſpirit of Turpentine, and diſtil it *per ſe*, by Retort in aſhes. So when the oil is extracted, Colophony will reſide in the bottom of the Retort. If you ſhall digeſt it afterward in Baln. as is ſaid of the Oil of yolks of eggs, all its *empyreuma* will be removed.

It heats, ſoftens, diſcuſſeth, opens, purges, and externally may be uſed inſtead of true Balſom, in all wounds; malignant, fetid, and incurable Ulcers, as Fiſtula's, the Wolf, and ſuch like running ſoars; in the Parotides fractures, and contractures, *&c.* But it doth not always *per ſe*, if uſed alone, prove ſo beneficial, as when it is conveniently mixed with other appropriates for curing the affects.

Oil of Cloves.

℞. Of Cloves groſly beaten four pound, of fountain water forty pound, macerate them in a hot place, as long as ſhall be convenient, adde of Tartar ℥ij. afterward diſtil it by a braſs Veſica with its Refrigeratory, and you will have ℥viij. of oil. In the ſame manner, Mace, Pepper, and the Seeds of Aniſe, and Coriander, *&c.* may be diſtilled.

It helps in cold diſeaſes of the Stomach, Liver, Heart, and the *Diarrhœa* from a cold cauſe; it diſſipates melancholly ſpirits, and clarifies the groſs. Externally it heals green wounds, and performs the office of true Balſom.

Oil

Oil of Sugar.

℞. Of white Sugar groſly beaten ℥ij. *Aqua vitæ*, ℥viij. Set fire of the *Aqua vitæ* in a ſilver or earthen diſh glazed, into which caſt the Sugar, continually ſtirring it with a Spatula, until the flame ceaſe; then add of Roſe-water ℥ j. mix them.

It corroborates, and by experience certainly helps thoſe that labour with a cough cauſed by coldneſs of the Lungs.

Oil of Tartar.

This oil, beſide the way above delivered in preparing the ſpirit thereof, is alſo made *per deliquium*, by putting Tartar calcined to a whiteneſs in a Cellar, or other moiſt place, until it be reſolved into oil, which muſt afterward be filtred. Alſo it may be prepared: If Tartar, after calcination be diſſolved in common water, filtred and coagulated; and the coagulate placed in a cold moiſt place, until it be reſolved.

This oil is an admirable Remedy in the Meaſels, all Ulcers, eſpecially venereal, in the Tinea, Scab, and Warts. It makes the face ſmooth, and the skin ſoft.

Oil of Amber.

Digeſt a pound of Amber beaten in one pound of white wine. Then adde a handful of prepared Salt, diſtil it by Retort, obſerving degrees of fire. By diſtillation twice rectifie it with Salt only.

This oil was once called Sacred, by reaſon of the admirable virtues it hath, being as well exhibited

per

per ſe, as mixt with others; in the Epilepſie, Appoplexy, Melancholly, Cramp, Vertigo, Peſt, Stone, cold defluxions of the Head, Palpitations of the Heart, *deliquiums* of the mind, difficulty of breathings, difficulty of making water, difficult Birth, Strangulations of the womb, retention of the Menſes, white flux of the Matrix, Worms, and Fevers.

A compounded Oil for the Hemicrania.

℞. Of Rue one handful, boil it in one pound of oil Olive, in a new earthen pot for half an hour. Then pour it it into a Retort, and to it adde of Venice Turpentine ℥xij. of Colophony ℥iiij. *diſtil* it in ſand; the clear water, which comes forth firſt, being of little value ſeparate. Afterward gradualſy encreaſing the fire, the oil will come forth, which receive apart.

In the time of the Fit, heat a little of it over a fire, and with Cotton moiſtned in it, anoint the fore-head and Temples, and the dolourous part alſo, ordering the Patient to go to bed.

A compounded Oil for the Womb.

℞. Of the powder of Rue, a little dryed, one ound Caſtor, ℥ij. Olibanum, Myrrh, of each ℥iiij, il of Linum ½ pound, digeſt them four days in orſe dung, or like heat; afterward diſtil them by etort in a cloſe Reverberatory. With this Liquor oint the Womb morning and evening.

Oil of Tiles.

Small pieces of Tiles or Flints (like Beans) make Red hot in a Crucible, which, ſo fiery hot, caſt into old oil Olive; cloſe the veſſel, and leave it for a night. Afterward diſtil the ſmall Stones with the oil by Retort. Rectifie the oil by diſtilling it the ſecond, and third time with prepared Salt.

Oil of Sulphur.

℞. Of Sulphur beaten one pound, *Calx-vive* ½ pound Mercurial Salt ℥iiij. mix them, and diſtil by Retort. For wounds and Ulcers, it is very profitable.

Oil of Salt.

The nature of Salt.

Salt conſiſts of divers parts; earthy, aqueous, and fiery. Its conſiſtency and ſolidity, is from earth, its Liquability from water, and its biting property from fire. It is ſharp, * γλυκύτης. * bitter-ſweet, cutting, ſubtile, penetrative, pure, fragrant, incombuſtible, and preſerves other bodys from corruption; perſpicaous, as air, by reiterated diſtillations; diſſoluble in humid, and Liquable in fire like Metals. And it is as the Soul in the body, according to *Pliny*, who after the Stoicks, ſaith, Salt is given to Swines fleſh, being as it were dead in its own nature, inſtead of a Soul. For this, in manner of ferment, where it hath power of penetration, converts the body, with which it is mixed into its own nature, by conſuming the humour obnoxious to putre-

putrefaction. *Raymund Lully* calls the ſalſuginous Liquor, diſperſed through the whole body, Urinal humour: *Paracelſus*, Mummy.

There are divers ways invented by Artiſts, of extracting the oil of ſpirit of Salt. Some diſtil Salt decrepitate *per ſe*, without addition of any external thing. But ſince ſalt is of eaſie fuſion; and when co-united in one, it retains the moſt contumacious ſpirits: after diſtillation for twenty four hours, all being cooled, they break the Retort, grind the Maſs of ſalt, and put it in a new Retort with the diſtilled Liquor; and this they repeat ſo often, as till the whole ſalt be reſolved into oil, which in the eighth or ninth diſtillation is wont to be. This Operation is too tedious. Others diſſolve calcined ſalt in a Cellar, or with Rain-water, and impaſte it with Potters Clay ſifted, and thence make ſmal balls or pellets, which when dryed, they put into a Retort, and ſo extract the ſpirit.

But I am wont thus to prepare it. I take of Sea ſalt calcined, two pound, and I mix it with ſix pound of flour of Tiles, Red Earth, or common *Bolus*: all which I put into a firm and large Retort, ſo as at leaſt a third part may remain empty; and applying a capacious Recipient, into which I firſt pour one pound of diſtilled water, then do I keep it diſtilling for thirty hours, obſerving the ſame degrees of fire mentioned in diſtillation of ſpirit of Vitriol. After ſeparation of the water and phlegm, I receive ℥xx. at leaſt of moſt ſharp oil, which muſt be rectifyed. It is endued with moſt potent virtues; whether it be uſed internally or externally. It renovates the whole Man, and preſerves from all diſeaſes; if it be uſed in rich Wine, or *Aqua vitæ*. Mixt with ſalt of Wormwood, and taken

ken either in Wine or water of Wormwood, it expels the Dropſie. It cures the Epilepſie, Jaundies, Fevers, Stone, and Maw-worms. By anointing it heals Members disjoynted, contracted, paralytick, and apoſtemated. Alſo it mitigates dolours of the Gout, if mixed with oil of Turpentine, or of Wax, or Camomil. Alſo it calcines all Metals, Stones, yea, Glaſs it ſelf: the moſt perfect work of Art.

Another way.

Diſſolve common ſalt in humid *per ſe*, filter it ſo often, as till no feces be left; then ſet it in horſe dung for two Moneths, afterward with moſt ſtrong fire diſtil it, and ſeparate the phlegm from the unctuous, ſalſugnous Liquor by *B. M.* Whatſoever is moſt obnoxious to corruption, if imbibed with this Liquor, it remains incorrupt for many Ages. It is believed, that that body of a moſt beautiful Woman was embalmed with this Liquor; which, as *Raphael Volateranus* relates, in the time of Pope *Alexander* the VI. was found about 117. years before, or thereabouts, in an ancient Sepulcher near *Albana*, ſo intire, and wholly free from any corruption, as if the Life had but that hour expired. Whereas, by the Sculpture upon the Marble Tomb, it was witneſſed to have lain there buryed above 1300. years.

Oil of Vitriol.

Diſſolve the beſt Vitriol in common water; the Solution digeſt by gentle heat of Baln. afterward filter it; and by vapour of Baln. in a Glaſs veſſel, abſtract the water till it contract a skinnyneſs. Then

ſet

ſet the veſſel in a cold place to produce perſpicuous Chryſtals; which removed, the remaining water evaporate until it contract a new skin, and produce new Chryſtals in a cold place. All which ſeparated, diſſolve, digeſt, and filter; and in a cold place again ſet to Chryſtallize; and as above, ſeparate, repeating the ſame labour the third time, until the Vitriol be freed from all Heterogeneal terreſtriety. This Vitriol put into an high Cucurbit, and in Baln. abſtract the flegm to a dryneſs, reverting the humid ſo oft upon its own earth, as till the dry ſhall have imbibed all the humid. The Maſs take out, and grind to a ſubtil powder, which put into a firm Retort, with an eighth part of its own weight of Spirit of wine perfectly rectified, and obſerving degrees of fire for three days, diſtil off all the Spirits. The veſſel being cooled, what ſhall be in the Receiver, mix with other two pound of Colcothar, as above prepared; and again for three days diſtil it. Then in an high Cucurbit ſeparate the ſpirit of wine by Baln. afterward diſtil the ſpirit of Vitriol by aſhes. In which ſpirit, if you ſhall diſſolve Corals or Pearls, you will have a true Antepileptick. The Oil, Red like blood, which adheres to the bottom, you may rectifie by Retort in ſand, or by digeſtion only, and ſeparate the earthy feces ſetling to the bottom from the oil. Its uſe is rather in Metallicks, than in Medicine.

Oil of Antimony.

℞. Of crude Antimony and Sugar candid, of each ℥iiij. of calcined Allom ℥j. grind and mix them together, diſtil them by Retort with a very

moderate fire. So will you have a Red oil, moſt apt for curing Ulcers.

CHAP. VII.

Of Liquid Tinctures.

BY the word Tinctures, Chymiſts do not underſtand, as the vulgar think, ſimple colours ſeparated or exalted from a mixt body; but eſſential colours of things, and ſuch as are inherent in the formal qualities, extracted from the concrete body. Wherefore Tinctures are ſometimes called oils, ſometimes ſpirits, and ſometimes Quinteſſence.

Tincture of dry Roſes.

Put ℥j. of Roſes dryed in the ſhade, in four pound of warm water, unto which adde ʒij. or thereabout of ſpirit of Vitriol or Sulphur. In three or four hours the water will be deeply coloured, which muſt be filtred. In which if you diſſolve ℥xij of Sugar, you will have a true Refrigerative of the Liver.

Tincture of Violets.

Bruiſe the Flowers, and macerate them in their proper water, or in oil of Sugar above deſcribed; afterward expreſs them, the expreſſion ſtrain until Tincture anſwer your deſire. Or.

Put the flowers to the noſe of an Alembeck, that the proper diſtilled water gliding through them, may abſtract the Tincture with them.

CHAP.

CHAP. VIII.

Of Balſoms.

CHymical Balſoms are no other than compounded oils, and by the addition of other things rendred more thick. They conſiſt almoſt of a triplicit Liquor, *viz.* ſpirituous, or aqueous, oleaginous, and thick like honey. With which ſometimes, as the nature of the matter requires, Musk, Amber, Civet, *&c.* are wont to be added.

Balſom of Cinnamon.

This is compounded of the Tincture extracted by ſpirit of wine, and inſpiſſate with oil, and ſalt of the ſame as alſo with white wax diſſolved, and wel waſhed in Roſe water from all its acrimony, which gives a convenient conſiſtency. Or it is made of Deer ſuet, or ſuet of a Wether well cleanſed and waſhed, every of them *per ſe*; or one of them may be mixed with the wax, and afterward with the extract oil, and Salt be reduced to a juſt conſiſtency. So are prepared Balſoms of Cloves, Juniper, Sage, Roſemary, Aniſe, and ſuch like; which as well for external anointing, as internal uſe, are moſt efficacious.

Balſom of Sulphur.

℞. Of flowers of Sulphur ℥ j. oil of Turpentine ℥ iij. mix them, and in a Glaſs placed in ſand, gently boil it for the ſpace of eight hours, until it be as Red as bloud. Then pour upon it common water, and by Alembeck diſtil off the ſuperfluous oil with

the water. In the bottom, the Balſom of Sulphur will remain; from which you may extract a Tincture with ſpirit of wine, and coagulate it, which is given in water of Hyſop, or Syrup of Liquoriſh, to thoſe that are afflicted with the Cough of the Lungs.

Balſom of Saturn.

Diſtil away two parts of Vinegar, impregnated with the ſalt of Saturn, that only a third part may remain. Then take of oil of Roſes ℥iiij. of the impregnated Vinegar ℥viij. Of this pour drop by drop upon oil, mixing them continually together in a braſs Mortar, until it be like Unguent. Which helps in Inflammations, and hot Gouts. If the ſame Vinegar impregnated with the ſalt of Saturn, ſhall be mixed with an equal part of common water, and applyed hot with double Linnen Cloaths, upon contuſions, in what part of the body ſoever, it preſently aſſwageth all dolour.

CHAP. IX.

Of Extracts.

EXtracts, ſpecially ſo called, are prepared of the Animal and Vegetable kind, by the benefit of accommodated Diſſolvents or *Menſtruums*, ſuch are ſpirit of wine, of Juniper, Whey of Milk, *Hydromel-vinoſe*, water of *redolent* Apples, fumitory, and the like, or waters of the ſame things, from whence you intend to prepare the Extracts. From Animals, Fleſh, Mumy, the Liver, Spleen, Lungs, Teſticles, and like parts, are choſen: Whence extracts

tracts of *Cranium* are famous, for the Epilepſie; of Ox-ſpleen, for provoking the Menſes; of the Liver of a Calf, for the Dropſie, and hepatick Flux; of the Lungs of a Fox, for the Aſthma, and like diſeaſes. From Vegetables, various extracts are made; as from Herbs, Flowers, Roots, Juices, Berrys, Rinds, Woods, Aromaticks, Seeds, and Fruits; as is manifeſt in *Quercetanus* his laſt Chapter, of reſtoring the *Pharmacopea* of Dogmaticks.

Moreover, for preparing purging extracts; many have hitherto uſed ſpirit of wine, for a diſſolvent; which becauſe it doth much infringe their Cathartick force, is not to be promiſcuouſly uſed in all. It may ſometimes be uſed, as in extract of *Hellebore*, *Coloquintida*, and *Scamony*; but in others, diſtilled waters muſt be ſubſtituted; as in Rubarb, water of *Endive* is moſt commodious; in Leaves of Oriental *Sena*, water of *redolent* apples, of Fumitory, and Fennel: in Agarick, water of Cinnamon; and ſo in others, others. Now, could ſuch an *Aqua vitæ*, deprived of its Salt armoniack, be obtained, as *Dariotus* (and after him *John du Val*, Phyſician of *Iſſoldunen*, likewiſe *Panotus* in his Treatiſe of the true preparation of Chymical Medicaments, in the Magiſtery of Tartar) teacheth, a more excellent could not be deſired for preparing extracts of every kind. Although *Dn. Mayand*, a Man in the Chymical Art long experienced, and my very good friend, did with me, according to preſcript of the above-named Doctors, attempt to prepare ſuch a *Menſtruum*; yet in this operation, we ſometimes loſt both the oil, and our labour. Whence a Man may conjecture, that when the good *Panotus*, in the above cited Magiſtery of Tartar, did admoniſh and

in-

invite others to reverence GOD, and render him thanks for ſo rare a Secret; he himſelf did not enough fear God, or render him praiſe, when he conſecrated ſuch a Magiſtery to Poſterity.

Extract of Sena.

Macerate the Leaves of *Sena* twenty four hours, in a ſufficient quantity of diſtilled water of redolent Apples; what is tinged, poured off, and filter; the Leaves being firſt ſtrongly expreſt. In the mean while, from the feces extract a ſalt according to Art, and commix it with the extract, which diſtil with gentle heat of Baln. until but two parts remain; or in a glaſs Baſon, exhale the ſuperfluous homor, by vapour of an hot Baln. to the conſiſtency of an extract. Note, the extraction of Tincture from the ſame Leaves of *Sena*, muſt not be the ſecond time repeated, leaſt the extract admitted into the body, excite grievous torments.

Extract of Rubarb.

Freſh Rubarb cut very ſmal, digeſt in water of *Endive*, or other odoriferous water, until it be coloured; what is tinged pour off, and repour on freſh water ſo oft, as until it will no more be tinged. The evacuations filter, circulate, and diſtil off the *Menſtruum* to the conſiſtency of an extract, by heat of Baln. the ſalt from the feces being firſt added, as in the former preparation.

Panchymagogon.

℞. Pulp of *Coloquintida*, *Hermodactils*, —
Black *Hellebore*, *Turbith*,
— *Diagridium*, of each ℥ij ß. *Agarick*,
Leaves of oriental *Sena* ℥iiij. *Aloes* of each ℥j.
Choice *Rhei*, ℥iiij.
Species of *Diarrhodon Abbatis*, ℥j.

Make an extract with water of Cinamon, according to Art, adding the ſalt from the feces. Doſe from ℈j. to ʒß.

For the Quartane.

℞. *Aloes* ℥iiij.
Myrrh,
Roots of *Gentian*,
Round *Ariſtolochy*, of each ʒiij.
— Oriental *Saffron*, ʒß.
Of the three kinds of *Saunders* of each ʒj.
Coltsfoot ʒ j. Leaves of *Sena* cleanſed ℥j ß.
— The beſt *Mithridate* ℥ß.

Pulveriſate what are to be pulveriſed, and make a Maſs with Syrup of *Scolopendrium*, of which make an extract with water of *Cardaus benedictus*, adding the ſalt of the feces. Doſe. From ℈j. to ʒß. the day before the coming of the fit in the morning, with ʒj. of water of the extract.

Germain Treacle.

Freſh and ripe grains of Juniper are beaten in a Marble Mortar; to every one pound of which, four

four pound of diſtilled Rain-water is poured, and for three days they are digeſted in a hot place; afterwards ſtrained through a cloath, and ſtrongly expreſt; the ſtrained Liquor filtred, and exhaled to the conſiſtency of an extract. Doſe ʒj. It is given in the Cholick, Stone, ſuffocation of the Matrix, ſuppreſſion of the Menſes, cold defluxions, and in the Dropſie. It is alſo a ſpecifick Preſervative againſt the Peſt, and all contagious air.

Laudanum, or Νηπενθὲς.
Quovis Homerico præſtantius.

A Narcotick extract is called *Laudanum*, that is to ſay, a Laudible Medicine, *viz.* by reaſon of the famous effects thereof, which we very often find in the moſt grievous diſeaſes, and dolours. For *Homer* witneſſeth, that the Remedy of *Hellen* was inſignized with ſuch a name, whereby all languiſhings of the heart, and ſickneſſes, are driven away, and pleaſant chearfulneſs, and joy is induced.

Some call it *Nepenthes.*

℞. Tincture of Henbane, extracted according to art, with ſpirit of wine, made ſharp with ſpirit of Vitriol or Sulphur ʒ j.

Extract of *Opium*, extracted as above, ʒj.
Extract of Oriental *Saffron*, ʒ j.

Mix theſe, and ſet them in a warm place for fifteen days, daily ſtirring them. The days expired, draw off the ſpirit of wine by Baln. to the maſs remaining in the bottom; adde extract of Caſtor ʒij.

The

The Tincture extracted, from ℥ij. of Diamber, by ſpirit of Juniper Wine in a vaporous Baln. together with the Diſſolvent.

Let theſe ſtand in digeſtion for a Moneth, ſtirring them often, until all the ſtrong odour vaniſh. Then add,

Tincture of Corals,
Perlucid Amber prepared of each ʒj.
Bone of the Stags-heart ℈ſs.
Tincture of Gold, ʒſs.

Firſt beat what are to be beaten, then mix all theſe in a Marble Mortar, and add

Oil of Amber,
Of Mace,
Of Cinnamon, of each ʒj.
Extract of Musk ℈ſs. but this in Women muſt be omitted: Put altogether mixed in a temperate place, that the Maſs may be dryed, of it thence eaſily to form pills. Doſe from one grain to four.

CHAP. X.

Of ſoft Tinctures.

ALthough Tinctures of this kind, by reaſon of the operations they perform, and the conſiſtency they have, may worthily be numbred with extracts; yet becauſe by Authors, they were endowed with the Title of tinctures; I thought it not amiſs to aſſign them a peculiar Chapter.

Tincture

Tincture of Honey.

Mix honey with very clean ſand, that it may be made a maſs; then on it pour ſo much ſpirit of wine, as may ſtand above it two fingers; digeſt it for five or ſix hours; the coloured ſpirit pour off, and pour on other, until it be no more coloured. The tinged ſpirit filter and coagulate. It helps the Pthiſick in a wonderful manner.

Tincture of Saffron.

This tincture is made with ſpirit of wine; which muſt ſo often be poured on, as till all the tincture be extracted, and a whitiſh earth remain. The tincture muſt be filtred, and the ſpirit of wine with gentle heat of Baln. abſtracted. It hath various and egregious faculties: and eſpecially it wonderfully recreates and reſtores the ſpirits in ſwounings, if one only drop of it be exhibited in a little broath or wine.

Tincture of Sugar.

℞. Of white Sugar pulveriſate one pound, put it in a Cucurbit, or other convenient veſſel, with 2 ſpoonfuls of diſtilled Vinegar, digeſt it in hot aſhes for ſix hours. Then pour on of *Aqua vitæ*, ſo much as will ſtand above it two fingers; digeſt it until it be coloured; afterward the tinged water pour off, and pour on other often, until it be no more coloured. Then remove the *Menſtruum per* Baln. and the tincture or Red eſſence will remain in the bottom, which muſt be circulated with Cordial waters. It is profitable in the *Syncopen*, and *deliquiums* of the mind,

mind, being exhibited with water of Cinnamon and Roſes.

Tincture of Sulphur.

Melt Salt of Tartar in one veſſel, and flowers of Sulphur in another; afterward mix them together, then ſuffer them to cool. Afterward grind the maſs; on which pour ſo much ſpirit of wine, as will ſtand about it four fingers. Digeſt it, until it be tinged with a moſt Red colour; ſeparate the *Menſtruum* by Baln. This tincture is the true Balſom of the Lungs.

Tincture of Coral.

Diſſolve ℥ j. of Corals in one pound of jaice of Lemons; digeſt it for eight days, then filter the Solution: in this tincture diſſolve of white Sugar ℥viij. Then digeſt it by evaporating to the conſiſtency of a Syrup.

Doſe one ſpoonful in every Hepatick flux, Dyſentery, and flux of bloud.

Another way.

℞. Of Coral beaten ſmal, what quantity you will, infuſe it in acid water, either of Oak, or of Juniper, *Guaiacum*, or Box rectified; (as we have taught in the Chapter of diſtilled waters) that the *Menſtruum* may ſtand above the Coral three or four fingers. Then place it to digeſt in horſe-dung, or like heat for eight days. What ſhall be diſſolved pour off, and pour on other acid water; digeſt and pour it off ſo often, as until the Corals be wholly diſſolved: the diſſolutions filter, and diſtil to a dry-

dryneſs. To the matter remaining in the bottom, pour the beſt ſpirit of wine. That will in eight days be tinged like bloud, being ſet in digeſtion: then ſeparate the tinged Liquor from the feces; repour on other ſpirit, digeſt, and pour it off, until you ſhall have extracted all the tincture. Then filter the tinged ſpirit, and coagulate it to the conſiſtency of a Syrup. If you will, you may circulate it with Cordial water, or add Sugar diſſolved in Roſe-water, and reduce it into a ſyrup.

Another way.

Corals are calcined with a like quantity of ſulphur, and the tincture extracted with diſtilled Vinegar, by digeſtion for five or ſix days.

Otherwiſe.

Corals beaten, are calcined with a like quantity of Salt-peter, for one hour in a fire ſo moderate, as the Nitre may not melt. Afterward they are put hot into a veſſel, and ſpirit of wine is poured upon them, and with it they are digeſted for twenty four hours. The tinged ſpirit is poured off, and other ſpirit repoured on, until it ſhall have extracted all the tincture.

CHAP. XI.

Of Calcination of Common Salt, Salt-peter, Vitriol, the Stone of the Spunge, Chryſtal, and Marchaſite of Silver.

Calcination of common Salt.

PUt common Salt in a crucible, or other earthen veſſel, filling it full almoſt to the top; then place the veſſel covered between living coals, until it be very hot all over, and the Salt ceaſe crackling. Afterward diſſolve it in common water, filter the Solution, and coagulate it in a new glaſs diſh.

Calcination of Salt-peter, or Mineral Cryſtal, or of Lapis Prunella.

Diſſolve Salt-peter in common water, and filter it through brown paper, that it may be purged from all its impurities. Then in a glaſs veſſel boil it, and ſcum it often before it be coagulated. When coagulate, and dry, grind it, and in a clean earthen veſſel placed in burning coals, liquefie the Salt. To every pound of melted Salt, inject ℥j. of flowers of Sulphur; yet not altogether at one time, but at ſundry times, until all the fatneſs be conſumed in flame. But the flame muſt ſtudiouſly be avoided. This Solution, Filtration, Decoction, Deſpumation, Coagulation, Eliquation, and Deflagration of the Salt, being thrice repeated: the Salt is ſufficiently prepared for medicinal uſe.

Of this Salt ℥ſs. diſſolved in water of Roſes, or Endive, is a principal *Arcanum* in the *Prunella*, or ſoar throat, being gargled; for it takes away all uncleanneſs of the mouth, and throat. And if a little of that water be ſwallowed, it aſſwageth all internal heat, and is an admirable cooler of the heart. It abateth the Cough, if taken with ſpirit of Wine: with water of Hyſop, it removes obſtructions both of the Lungs, and Liver. Shortneſs of breath, it cures. Hoarſneſs it helps, and reſtores loſt ſpeech, if ℥ſs. thereof be taken in a morning faſting, with the yolk of an Egge moderately boiled. Moreover it is uſeful in all diſeaſes, both internal, and external, as *John Tholdens* in his Halography, and *Bernard Penotus*, in his book of the true preparation of Chimical Medicaments amply teach.

Calcination of Vitriol.

Dry Vitriol to a whiteneſs, in an earthen veſſel, not glazed, with moderate fire: afterward encreaſe the fire for a quarter of an hour, that the Vitriol may wax red; then is it called Colcothar.

Calcination of the Spunge Stone.

Heat the Stone of the Spunge red hot often, and as often extinguiſh it in diſtilled Vinegar, until it be reſolved into a Calx. Its uſe in Calcination is for extracting tincture.

Calcination of Chryſtal.

Chryſtal reverberated for ſix hours in a crucible, reduce to a ſubtile powder; and mix it with an equal

equal quantity of Salt-peter: and again reverberate it with a vehement fire for eighteen hours. Pour it out while in flux, into clear water; and what remains undiſſolved, dry, and reduce to an *Alcohol*. Then with the ſame water boil it, until it be thickned like a Poultis; after which, lay the Spiſſitude upon pieces of glaſs, to dry in heat; and again reduce it to an *Alcohol*: and if you will, ſet it in a cold humid place to be reſolved. If any thing ſhall remain ſtill undiſſolved, reiterate the Calcination with Nitre, and the other labours, as above, that it may be Soluble.

Doſe, three or four drops, with a like quantity of oil of Juniper: Againſt the Stone of the Reins and bladder.

Another way.

Make clear and pondrous Chryſtal red hot often, and as oft exſtinguiſh it in diſtilled Vinegar, until with the leaſt touch it may be reduced to powder. Then mix it with a like quantity of Salt-peter, and reverberate it for eighteen hours. Then by many ablutions, extract a fixed Salt-peter, dry it, and reduce into an *Alcohol*. It is profitable in the Stone, Falling ſickneſs, Dyſentery, and Sterile Breaſts. If any one would for the aforeſaid affects, more ſubtiliate this impalpable powder; let him digeſt it twenty four hours in ſpirit of Wine, and by Retort diſtil it. What ſhall remain fixed, muſt be reverberated as above; and ſo often digeſted and diſtilled, as until the greater part ſhall aſcend with the ſpirit of Wine. Then the ſpirit of wine being ſeparated by diſtillation, what remains in the bot-

tom of the veſſel, muſt be ſet in a moiſt place, that it may be diſſolved into a water or oil.

Calcination of Marchaſite of Silver.

Weiſmouth or *Marchaſite* muſt be diſſolved in water made of Salts, unto a ſulphureous and Stiptick clearneſs. The ſolution being clear, pour upon it the * eſſence of all liquid things; ſo in a moment it will be precipited into an *Alcohol*, moſt white like ſnow, which muſt be freed from all acrimony, and dryed. Its uſe is for removing vices of the skin.

* Nucleus.

CHAP. XII.

Of the various Calcination of Antimony.

Calcination of Antimony.

℞. Of choice Stibium four pound, of ſalt prepared five pound. Theſe pulveriſed, mix. And in a veſſel of earth with a broad bottom placed over a fornace of Reverberation, ſtill them together, for the ſpace of five or ſix hours, until the fume ceaſe, and the Stibium be made white, and ſomewhat yellow; (diligently beware of Liquefaction, and the noxious fume.) Afterward grind it to powder, from which, by affuſion of hot water, and alſo of cold often, the ſalt muſt be extracted; which dryed and pulveriſed, ſublime *per ſe* in a proper veſſel for ten or twelve hours. Having gathered the flores, grind the *Caput mortuum*, and reverberate it to

a redneſs in a moneths ſpace, the veſſel being ſo cloſed, by reaſon of the aſhes, as the fire may not be impeded from due operation. After calcination, draw forth the tincture with radicate Vinegar; and further elaborate it by filtration, ſeparation of the *menſtruum*, and circulation with Cordial water.

Another Calcination of Stibium, and Emetick Powder, or Mercurius Vitæ.

℞. Of Antimony pulveriſed, ℥ iij.
Mercury ſublimate, ℥ viij.

Mix them together, and diſtil them in aſhes by a glaſs Retort, unto which annex a Receptory half full of water. Afterward adminiſter fire gradually, until a gummoſe Liquor, like butter, adhere to the neck of the Retort, which with a live coal, externally applyed, cauſe to reſolve, and it will be precipited into the water in a white powder.

Then leiſurely give fire of ſuppreſſion, until a red Liquor come forth; which beginning to appear, remove the Receiver, and apply another preſently; and intend the fire for an hour or two, until the Mercury joyned with the ſublimate ſulphur of Antimony, be ſublimed to the neck of the Retort into Cinnabar. The precipitate powder digeſt for one night, and ſeparate the water (impregnated with ſpirit of Vitriol) from the ſublimate, and keep it for diſſolving Corals and Pearls. Then upon the precipitate powder, pour other water often, until all its Acrimony be removed; afterward waſh it with Cordial water, and dry it with moſt gentle heat. Doſe, in ſtrong conſtitutions, is four or five grains, but in the weak, two or three grains in a roaſted Apple, or conſerve of Roſes.

It is beneficial in the Peſt; diſeaſes of the Head, Fevers, *Lues-venerea*, Leproſie, Dropſie, and in Ulcers. But in exhibition hereof, thoſe ſingular Cautions delivered by *Crollius* in his *Baſilica Chymica*, are to be obſerved; the firſt whereof is: That in the uſe of Antimony, care be taken, that no conſtipations be, cholick dolours, nor one of the principal Members hurt.

Cautions in exhibiting of Antimony to be obſerved.

The ſecond; nor that in thoſe, to whom Antimony is given, a vein be cut either before or after taking it.

The third; that it be not exhibited to cholerick perſons, nor ſuch as difficultly vomit, and who have otherwiſe but little ſtrength; but unto thoſe, who are prone to vomit, having a ſtrong ſtomach; a large and wide throat, and who are otherwiſe accuſtomed with eaſe to vomit, and in whom the ſickly matter eaſily comes upward.

The fourth; where vomiting is needful, that a little peaſe broth gently boiled, or fat broth of Hens, or warm beer be exhibited, and that certain times if need be; that the ſick may the more eaſily vomit, and the action of the medicine be accelebrated.

Liver of Antimony, or Crocus of Metals.

℞. Of crude Antimony one pound, of Salt-peter, ℥xij.

Mix theſe in an Iron mortar, where having firſt ground them well with a live coal, ſet fire to the mixture; and it will preſently be Liver of Antimony. Afterward ſeparate the Salt peter. Doſe, from twelve to twenty grains, in infuſion of white wine,

wine, water of *Cardnus Benedictus*, or other convenient Liquors; eſpecially in Peſtilential Fevers.

Another Calcination of Stibium, working only by the inferiour parts.

℞. Choice Antimony, and ſalt decrepitate, of each one pound, theſe ground together, and well mixed, reverberate in a well luted crucible for twelve hours, encreaſing the fire to it by degrees. The veſſel cooled, waſh the matter ſo oft with *Aqua dulcis*, as until all the acrimony be removed, then dry and grind it. Doſe, from twenty five, to thirty five grains.

Regulus of Antimony.

℞. Of Antimony, Salt-peter, and Tartar, of each one pound, mix theſe pulveriſed well together, then ſet a crucible in the fire, that it may be hot. Which being done, inject a ſpoonful of the powder, and preſently cloſe the veſſel until the fume ceaſe; then removing the cover, inject more of the powders, and cloſe it again, ſo doing till all the powders be in; after which, give fire of fuſion, and ſhake the crucible, that the *Regulus* may ſettle to the bottom. The crucible cooled, ſeparate the *Regulus* from the feces, and keep it.

And from the Feces, a Sulphuraurate Diaphoretick, may in this manner be made.

℞. The feces of the *Regulus*, as above prepared, and reduce them to a *Lexivium* by digeſtion or ebulition, then filter it hot through brown paper. To this *Lexivium* when cold, add a little diſtilled Vinegar, and you will find the *Crocus* edulcorated

by many ablutions: Which dry, and keep apart. It wil be an admirable ſudorifick and mundificative of the bloud, moſt apt for expelling many diſeaſes. Doſe from ℈ſs. to ℈j.

Regulus Martis Stellate.

℞. Of Horſe nails ½ pound, Antimony one pound, make the Mars hot in a crucible, then add the Antimony beaten, and cover it, giving fire of fuſion; afterward inject at times ʒj. of Nitre; and laſtly, pour all out into a Cone. Again pour the *Regulus* into the crucible, and add ʒj. of Nitre at times, as above. Repeat this Labour five or ſix times, until you have *Regulus Martis Stellate.*

Diaphoretick Antimony.

℞. Of Antimony, and Salt-peter, of each one pound, mix them, being pulveriſate together; then ſet a crucible in the fire, that it may be hot; when hot, inject ʒj. or thereabout of this mixtion, and preſently cover the crucible, until the fume and noiſe ceaſe. Afterward inject more of the powder, and cloſe the veſſel as above, this do continually until all the mixture be put in, then adminiſter fire of Liquefaction for a quarter of an hour. Which being done, and the veſſel cold, take out the matter and grind it, mixing it as above, with an equal quantity of Salt-peter, calcine it in the ſame manner as before. The matter afterwards being ground and edulcorated with ablutions, reverberate in an earthen veſſel cloſed, for the ſpace of twenty four hours, until it be made a candid powder, of which the Doſe is fifteen grains.

Another

* *Another.*

℞. Of the venenate ſcum of the two Dragons once rectifyed, ℥iiij. On which, when reſolved in heat, pour ſpirit of Balſamick ſalt, ℥iij. from this mixture, diſtil away the Liquor in ſand to a dryneſs. The earth take out; and when very well ground, on it repour its own diſtilled Liquor, with ℥j. of freſh Balſamick ſpirit, and diſtil as before.

Afterward to the powder ground as before, again pour on the diſtilled Liquor anew, adding other ℥ij. of ſpirit; and proceed again as at firſt. Then deliver the dry and ground matter to be examined by *Vulcan*, for twenty four hours, continually ſtirring it with a clean iron Inſtrument. At length from it often abſtract the *Alcohol* of wine, that a candid dry powder may remain. It is of ſingular uſe in all peſtilential affects, and malignant Fevers generally infeſting.

CHAP. XIII.

Of Calcination, and preparation of Mercury.

MErcury is a Mineral body, compounded of ſubtile ſulphureous earth and water ſtrongly commixed. The earthy ſubſtance thereof muſt be purged from its groſs ſulphureous terreſtreity, and its watery ſubſtance, from the ſuperfluous humidity in it contained. Mercury is two-fold, natural and artificial.

The natural, active, and well purifyed in Natural Mercury.

Almagro

Almagro near *Calatrava*, in the Kingdom of *Caſtile*, is found living, *per ſe*, flowing, and coagulate into cinnabar which is extracted by force of fire. This moſt ancient *Minera*, *Pliny* calls the continent of eternal Liquor.

Like unto this is found in *Idria*, a Village of the County of *Goritz* in *Slavonia*. But the *Spaniſh* excels in goodneſs, although *Iuria* be more fertile. But there is one thing remarkable, and worthy of admiration, *viz.* that although the bordering Towns and people of *Idria*, are almoſt every year afflicted with a Peſtiferous *Lues*, yet from this evil they ſometimes are wont to be wholly free, which (I going to that place about eight years ſince) was confirmed to me by the people, that a certain man of a very great age had obſerved it ſo in himſelf, and had received like Information from his Anceſtors. From whence, as well as from other innumerable examples, it is found that Mercury is an *Alexipharmacon* againſt all corruption, and putrefaction. Alſo no leſs ſtupendious, and nigh to a prodigy, is that which I there noted: There was a decrepit Old man, who, having ſpent the whole time of his Life in preparing cinnabar, did perpetually tremble; and he did ſo dealbate gold coin, by compreſſing it in his hand, as the native colour thereof did wholly diſappear.

There is alſo other Mercury found in the Mountain called *Gimnavoda*, ſix miles diſtant from *Cracovia* in *Poland*, between *Tarnava*, *Ribie*, and *Streleizky*, which at certain times of the year breaks out on the ſuperficies of the earth, eſpecially in the Autumnal quarter. Yet about the Feaſt of *John Baptiſt*, I there gathered many grains like Peaſe in the roots of green things. But this Mercury is very aqueous,

queous, and far inferiour to that of *Sclavonia*, as well as to the *Spaniſh*. The natural is alſo found in many other places, and ſometimes in Gold and Silver Mines.

Artificial Mercury.

The Artificial, and its way of preparing is ſufficiently known to Artiſts, *viz.* by reſuſitative ſalts, as well from middle Minerals as Metals. Yet in this City, I have known many credible perſons, and of great Authority and Dignity, who affirm, they have extracted living Mercury, not from Minerals only, but from humane bloud, firſt calcined, and from Plants alſo.

The ſign of the goodneſs of Mercury.

That Mercury is the beſt, which if a dram of it be put into a very clean Silver ſpoon, and that ſet over a fire, ſhall after evaporation leave a yellow or white ſpot. But what ſhall blacken the ſpoon before it can be adhibited to medicinal uſe, muſt thus be purged.

℞. Of Mercury, and of diſtilled Vinegar, of each one pound, put them in a ſtrong veſſel with an handful of prepared ſalt, ſtir them very well together for a quarter of an hour, that they may be mixed, and the Vinegar receive the blackneſs of Mercury to it ſelf. Then pour out the Vinegar with the Mercury into a glaſs-baſon, and ſo often waſh it with warm water, as until all the blackneſs and ſalſature be ſeparated from it. When it is dryed, put it in the former veſſel with Vinegar and ſalt as above, repeating the former Labour three or four times, and at laſt paſs it through a skin. But this is a vulgar and imperfect purgation; a more perfect follows.

℞. Mer-

℞. Mercury precipitate, cinabariſate, or ſublimate; mix it with two parts of it's own weight of calcined Tartar, or *Calx-vive*, diſtil it by a glaſs Retort in fire of ſuppreſſion, or in a cloſe Reverberatory, applying a large Receiver half full of water. So you will have Mercury purified better than in the precedent manner.

Yet the moſt perfect way of purifying Mercury, than which a better cannot be given, is the *Amalgamation* thereof with perfect bodies; diſtilling it certain times by Retort, every time removing the earthy, ſulphureous, and ſetent feces, and a new amalgamating it, and at length paſſing it through a skin.

A White Precipitate.

Mercury is diſſolved in *Aqua fortis*, and by affuſion of ſalt water precipited into a white powder. The diſſolvent is by inclination ſeparated, and the precipitate, by many ablutions, with digeſtion freed from all its ſaltneſs and acrimony. Then is it dryed and waſhed with Roſe water, and again dryed. Doſe internally, from eight grains to ten, chiefly in Venereal diſtempers. It purgeth only by the inferiour parts.

A Red Precipitate.

After diſſolution of Mercury in *Aqua fortis*, evaporate it to a dryneſs with violent fire, and to the bottom of the veſſel a Red precipitate powder will adhere; eſpecially fit for venereal Ulcers.

Pre-

Precipitate Mercury. From the beſt, the beſt is made.

℞. Of Mercury purifyed ℥iiij. On which pour of oil of ſulphur rectifyed ℥viij. digeſt it for two days in ſand, then by Retort diſtil it, three times cohobating, laſtly with violent fire, that the Retort may be Red hot. Which being done, take out the white maſs, and grind it; and with hot water waſh it often, until you ſee the precipitate turned to a moſt yellow powder, upon which, burn ſpirit of wine thrice. So may it be ſecurely given into the body. Doſe, from three or four grains, to ſix, in purging Extracts, conſerve of Roſes, or ſugar of Roſes. It helps in infirmities cauſed by putrefaction of humours, and in deplorable diſeaſes. It purifies the bloud in the Gout, Dropſie, and in all continued Fevers, it is a principal *Arcanum*.

Another Calcination, and Precipitation of Mercury.

Mercury diſtilled from *Sol*, or *Luna*, and purifyed as above, either *per ſe*, or with an eighth part of *Sol*, or *Luna*, precipitate into a Red powder, in this manner.

℞. A ſmall veſſel with a long neck, in which put ℥iiij. of Mercury; place the veſſel upon an Iron plate in a fornace of ſand, adminiſtring a continued fire, for the ſpace of fourty days. The neck of the veſſel muſt ſtand above the ſand ſix or eight thumbs breadth; and for the firſt ten or twelve days, the Mercury that ſhall aſcend to the neck of the veſſel, muſt be certain times a day, every day thruſt down

and

and precipited to the fiery bottom, with an Iron Rod, having a Linnen cloath bound to the end of it, as *Geber* teacheth. This way of precipiting Mercury, is not the method of the modern, but ancient Philoſophers. The days being expired, if any crude Mercury be found in the bottom, it muſt be ſeparated from the Red powder, which hath wonderful faculties in medicine. For it is a moſt excellent Cathartick in the Leproſie, ſo kindly looſning the belly, as it may ſafely be given to Children, and Women with child: ſharp humours it mitigates; it purgeth out phlegm, and amends the hot and dry conſtitution of the bowels. Doſe ſix grains.

Another.

Diſſolve Mercury in *Aqua fortis*, and precipitate it according to Art, by exhalation of all its humidity, that the precipitate may be Red. When pulveriſate, put it into a ſtrong veſſel, pouring on it ſo much Vinegar three times diſtilled as will ſtand above it five fingers; place the veſſel in ſand, adminiſtring fire, that the vinegar may gently boil for the ſpace of ſix hours, and the precipitate be wholly diſſolved.

Filter the ſolution, and upon it pour Liquor impregnated with the ſoul of the world; and preſently the Mercury will be ſeparated from the Diſſolvent, which muſt be waſht and dryed, and ſo reſerved for uſe. Doſe, from four grains to five.

Pre-

Precipitation of Mercury in a moment.

Put the Red pulveriſate matter in a crucible, expoſing it to a violent fire for four hours ſpace, until it do in a manner begin to vitrifie, and adhere to the ſides of the crucible. Then remove it from the fire, and when cold, grind it to a ſubtile powder, and put it into a glaſs veſſel, pouring *Aqua Regis* rectifyed upon it; then ſet it in digeſtion for twenty four hours, which time elapſed, by inclination evacuate the tinged water; and pour on other water, repeating the ſame Labour ſo oft, as until it ſhall have extracted all the Tincture. The evacuations diſtil to an Oleaginy. Of this oil ℞. ℥j. and pour it upon ℥iiij. of crude Mercury, and ſo it will be precipited in a moment. Nor will the oil adhere to the Mercury, if it be diſtilled off with ſtrong fire. After exhalation of the oil, ſome of the Mercury will be ſublimed, but the greater part will remain fixed. Its uſe is in augmentation of *Sols* and moſt red vitrification.

A Diaphoretick Precipitate.

Diſſolve Mercury diſtilled from *Sol*, or *Luna*, and purged, as above in *Aqua fortis*, which in a veſſel with a long neck, and proportionate Alembeck annexed, abſtract by fire of the third degree with double cohobation, that the Mercury may be made Red; which muſt afterwards be edulcorated by calcining in a crucible, placed in the fire, continually moving it with an Iron rod for a quarter of an hour or thereabout: or elſe with the following water. ℞. Of diſtilled vinegar two pound, of the phlegm of

of Allom ½ pound, of reverberated *Calx* of Egg-ſhels ℥vj. diſtil them together to a dryneſs. Of this water ℞. three pound; of the aforeſaid precipitate Mercury, one pound; mix and digeſt them for one day natural, afterward diſtil them by Alimbeck, with three cohobations, toward the end encreaſing the fire, that the matter may be well dryed; which circulate for one day natural with ſpirit of wine. Then ſeparate the ſpirit by diſtillation; and again circulate and diſtil it. Repeating the ſame labour the fourth time.

This is the true preparation of precipitate Mercury, for expelling infinite diſeaſes, and eſpecially *Lues Venerea*, whether it be internally taken (for ſo elaborated it only provokes ſweat) or externally applyed with Butter, or any other medicament.

A Diaphoretick Precipitate of Cinnabar.

℞. Of vulgar cinnabar ℥j. Of prepared ſalt ℥ij. Grind and mix theſe together, and in a convenient veſſel, pour on them of oil of ſulphur made *per Campane* ℥iij. digeſt theſe three days in aſhes, afterward by violent fire, cauſe all the humidity to evaporate. In the bottom a white maſs will remain, which muſt be edulcorated by frequent ablution. Doſe, from ſix grains to ten, chiefly in venereal diſtempers. It is given with conſerve of Roſes, and three or four ounces of decoction of *Sarſaparilla*.

Diaphoretick Mercury of Venus.

℞. Of filings of Copper, ℥j. Of Mercury meteoriſate ℥ij.

Mer-

Mercurial ſalt, ℥ij ſs. Put theſe ground and mixed together in a ſtrong veſſel, which place in ſand, and adminiſter fire until all be melted, as wax. Then take the veſſel hot as it is, and put it in cold [water] that it may break in ſunder, and the greeniſh Mercury flow out, which, when dryed, put into a ſmal Retort, with ſpirit of ſulphur or Vitriol, and in aſhes ſet it in digeſtion for one day natural. Which being done, diſtil it in ſand, twice cohobating it; then waſh it twice, or thrice, and the laſt time with cordial water.

It is a moſt excellent Diaphoretick Bezoardick Remedy againſt the Peſt; if two hours after the firſt aſſault of the diſeaſe, it be taken in Liquor, it preſerves from death. Doſe one, or two grains in appropriate water.

CHAP. XIV.

Of Calcination of Saturn, and Jupiter.

SInce as *Geber* ſaith, ſolution of bodies is impoſible, the compoſition being unknown: before we come to calcinations of Metals, to ſpeak ſomewhat touching the natures of them, will be in this place very ſuitable.

Rightly did *Hermes*, the Father of Phyloſophers underſtand, when he ſaid; That which is ſuperiour, is as that which is inferiour. For by the ſame reaſon as nature doth produce Plants, and other Vegetables in the ſuperficies of the earth; ſo doth ſhe in ſubterranean places generate metals, though more ſlowly and in a longer ſpace of time, of the humid unctuous vapour of Argentvive, and ſulphur vitriolate by

its own heat (containing properties in it self) decocting Mercury. Whence *Hydrargyr* is said to be the Mother of metals, and sulphur the Father. And in these are represented the four Elements, which are the remote matter of all natural bodies. For Mercury, as Feminine cold, and humid, holds the property of water, and air; and sulphur, as masculine, hot, and dry, bears the representation of Fire and Earth. If any shall affirm, that as well of the vapour, as juicyness [found in Mines] the matter of metals consists, I will not gainsay it. For when I, the last Summer, in *Hungaria*, descended into the Silver Mine in *Schemnitz*, about fifteen hundred Cubits deep; I Learned of the Miners, (who, by reason of the exceeding heat of the Mine, did work without any cloaths, not having so much as a shirt upon their naked bodies) that Mineral vapours did frequently arise from the center of the earth, and extinguish their lights, and themselves also, if they did not make haste away: and that, some time after, when they entred the Pit, they should find those damps or vapours coagulated into a mass to the sides of the wall; which with a gentle touch, would be fluid, as oil. Whence it may safely be inferred, that the vapour is the more remote matter of Metal, but the sulphureous and mercurial juice, the more near matter of the same. Also I have at present with me, mineral Stones (from the same Mine, and others) which either the vapour, or such an unctuous humid mineral juice hath penetrated; and in some of them is plainly to be seen, a crude matter, not sufficiently cocted; in others moderately cocted from one pound of which, ℥vj. of pure silver may be taken, and about ℥ss. of Gold. In others is matter perfectly decocted, so as the silver

is

is visible on the superficies, and in one vein shootings of pure gold may be beheld. Although there be some, who, by reason of certain frivolous reasons, deny Mercury and sulphur to be the matter of metal; yet Physiophers, who have experience in metals, believe the same, and that such a matter is found in all Mines and veins of the earth, do with one consent witness. With whose opinion, the judgment of all Miners, Melters, and tryers of Meals agree. Likewise Physicians know, that all diseases of such as labour in Mines, arise from the admission of crude, sulphureous, and mercurial spirits into the body: and that metals in external affects, perform the same that Mercury doth. Yea, that all metals, with no great labour, may be reduced into *Argentvive*, and *Argentvive* into all metals, is well known to Physiophers.

Calcination of Saturn.

Melt Lead in a vessel of earth or Iron, and purge it from its *Scoria*'s. Then encrease the fire, that it may be red hot in the vessel, continually stirring it with an Iron spatula, until it be reduced to a *Calx*, which if sifted, and afterward longer reverberated, will be *Minium*.

Calcination of Jupiter.

℞. English Tin, not sophisticate (which you may know by its weight and malleation) four pound, melt it in a pot with a flat bottom, and purge it from its *Scoria*'s. Then inject a little salt Armoniack; and encreasing the fire til the pot be red hot, cast in one pound and half of prepared salt,

ſo long ſtirring it with an Iron ſpatula, as until it be reduced to a *Calx*; which afterward, by violent fire muſt be reduced to a body, and ſeparated from the impure and blackned ſalt.

Again mix it with one pound of prepared ſalt, and calcine it as above. Waſh the *Calx* from all its ſaltneſs, and reverberate it for eight days, that it may be turned to an *Alcobol*: From which, by affuſion of *Alkaliſate* vinegar, a ſalt is extracted, digeſtion for certain days being adhibited, and the matter afterward filtred and coagulated.

Otherwiſe.

Jupiter may alſo be calcined, as *Saturn*, without any addition of ſalt. Or elſe they may be calcined in a wooden Bowl well coated with clay; if they be firſt melted in a crucible, and from thence poured into the ſaid wooden veſſel, and there be ſtirred about very ſwiftly.

Diaphoretick Jupiter.

℞. Of Engliſh Tin filed, or as above calcined either in a veſſel of wood, or earth not glazed, ℥ij. Of Mercury ſublimed ℥iij. Mix them, and by Retort diſtil them in fire of ſand, applying a Receiver half full of water; and when it begins to diſtil, give a moderate fire of ſuppreſſion, until all the Liquor ſhall be diſtilled, and precipited into the water. But what ſhall be ſublimed to the neck of the Retort, ſcrape off, and digeſt it with what is diſtilled for one night. The water impregnated with ſpirit of vitriol, ſeparate and keep it for uſe: but dry the *Cax*; of which the doſe is from four grains to ſix.

CHAP.

CHAP. XV.

Of Calcination of Mars, and Venus.

Calcination of Mars.

℞. Of filings of Steel by Ventilation and Ablution, diligently cleanſed from filth two pound, of prepared ſalt three pound, mix them, and in a pot for one day natural reverberate them. Then take out the maſs, and grind it, afterward diſſolve it in hot water, and waſh it ſo often as until it be freed from all ſaltneſs and terreſtreity. Which being done by grinding and ſifting, reduce it to a ſubtile powder. Then again reverberate it, for eight or ten days, until the ſuperficies be converted to a moſt red *Crocus*, and impalpable; which removed, reverberate the remaining part ſo oft, and ſo long, as till it be all reduced to a *Crocus*.

Note, That the veſſel containing the Limature, muſt have a cover, that no coals or aſhes may fall into the *Crocus*, yet the cover muſt be ſo placed, as between it and the veſſel, the flame may have free acceſs.

Another way.

Crocus Martis is alſo prepared by putting ſmal plates of Steel red hot, and ſparkling into rolls of ſulphur, by the force of which they melt, and fall down in ſmal grains, into a ſubjacent veſſel half full of cold water, or vinegar. Dry the grains, and grind them to a moſt ſubtile powder, and if you will, you may reverberate them to a *Crocus* in the ſpace of ſix or eight hours.

It hath virtue of expelling, opening, and attenuating; which filings of Steel also acquire, being reduced to a most pure *Alcohol*, by the benefit of simple water.

Otherwise.

Dissolve ℥j. of filings of Iron in ℥viij. of *Aqua fortis*, and distil off the *Aqua fortis* by Alembick in sand. So you will have ℥jß. of most red *Crocus*.

Otherwise.

Reverberate filings of *Mars*, with a like quantity of beaten sulphur, for four or five hours. It hath an aperitive virtue; but it will have a greater, if it be calcined for half an hour, or thereabout with double its own weight of sulphur beaten smal.

Another Calcination of Mars.

Digest filings of Iron or Steel in vinegar thrice distilled, until it be coloured. Pour off what is tinged, and pour on other fresh vinegar so often, as until it shall have extracted all the Tincture. Filter the evacuations, and distil them, and in the bottom will remain a red powder, which must be reverberated for one day natural into an impalpable *Crocus*. It hath virtue of constringing.

Otherwise.

Crocus Martis is also made with oil of sulphur thus. Pour oil of sulphur and spirit of wine, of each an equal part into an Iron spoon, and by gentle heat evaporate it, till the humidity be consumed:

med: afterward if it ſettle for certain days, you will find a moſt ſubtle powder, which keep in a a Phial firmly cloſed; that no air may enter, becauſe it will reſolve if expoſed to the air.

If ſome grains of this be given in broth, or other convenient Liquor, it will be a true Reſtorative of the Liver, helping in all diſeaſes thence ariſing, as the Dropſie, and ſuch like.

Calcination of Venus.

Venus is diſſolved in *Aqua fortis*, and by affuſion of warm water, with a ſmal piece of Iron or Silver, it is precipited to the bottom of the veſſel. Or elſe plates of Copper are reverberated in a Potters fornace into burnt braſs, which with eaſie contrition is reduced to a *Calx*. Or ſmal plates are put into a crucible, with an equal part of ſulphur beaten ſmal; making *S. S. S.* that is, lay upon lay, and ſo reverberated into *Æs uſtum*.

CHAP. XVI.

Of Calcination of Luna, and Sol.

Calcination of Luna.

DIſſolve *Luna* in *Aqua fortis*, and by affuſion of ſalt water, precipit it into a bright *Calx* (to the bottom of the veſſel) which by frequent pouring on of common water, muſt be edulcorated, and then dryed. ℞. Of this *Calx* ℥j. of prepared ſalt, ℥ij. of Salt-armoniack ʒij. Mix theſe well in a glaſs mortar, and reverberate the mixture, for eight

days. Afterward extract a tincture with ſpirit of wine *Alkaliſate*, and circulate it. It is profitable in *Manja*, and other diſeaſes of the Brain.

Calcination of Sol.

Make Amalgamation of *Sol*, by purifyed cement, with ſix parts of Mercury, as follows. ℞. A thin plate of gold, and cut it into exceeding ſmal pieces; which put into a crucible placed in ſuch an heat, as the gold may only be red hot; then in another crucible make your Mercury hot, and preſently pour it out upon the gold, and mix them with a ſtick, that they may be incorporated. Then cool it, and having admirably well waſhed the maſs, paſs it through a skin, and preſs out the ſuperfluous Mercury, that the maſs may remain conveniently hard, which muſt be long ground, with double its weight of prepared ſalt in a glaſs mortar, ſo as nothing of the Amalgama appear. Put all this into a ſtrong crucible, covered, and luted, only a little hole left in the Luting, and reverberate it for one day natural; taking great heed, that the gold melt not. This being done, you will find your gold calcined, but the Mercury and ſalt vaniſhed. Then a new amalgamate your gold, and paſs it through a skin as above; and mix it with double its weight of ſulphur vive, grinding them very well together. After which, put the mixture into an earthen glazed pan, pouring on it the beſt ſpirit of wine, unto which ſet fire, that it may burn upon it. After the deflagration of which, and of the ſulphur, you will find the gold ſpungeous, and much attenuated, eſpecially, if the ſame proceſs be twice or thrice repeated. Some grind the Amalgama with

flowers

flowers of ſulphur, and having put it in a crucible placed in burning coals, they continually ſtir it with an Iron rod, until the Mercury fly away in fume.

But before gold can be calcined with Philoſophick calcination, it muſt be cemented, as is ſaid either with vulgar, or *Regale* cement. The vulgar cement, is thus made.

℞. Of flour of Tiles, ℥viij. Salt prepared, ℥iij.

White vitriol ℥ j. Salt-peter, and *Æruge*, of each ℥ß.

The *Regale* cement, which belongs only to moſt pure gold, is thus made.

℞. Of flour of Tiles, four parts. Salt-armoniack, Salt-gem, and common ſalt prepared, of each one part. Theſe commixed and united, muſt be moiſtned with Urine.

Some make thin plates of gold red hot before they are compounded, and ſuffer them to cool; that if any defilement adhere to the ſuperficies, it may be conſumed, and leave more free acceſs, and admittance for impreſſion to the ſharpneſs of the medicines. All being duly prepared, ſprinkle the powder equally in the cementatory pot, that it may be a finger thick. Then put in your thin plates of gold moiſtned with urine in ſuch order, and ſo equally placed, as one may not touch the other; leaſt body cohering to body, the matter be burnt, and by encreaſe of heat, the edges be melted together. Having diſpoſed the firſt lay of plates in order as above, then on them ſprinkle of the medicine again, the thickneſs of one finger, and ſo proceed to lay in more plates, and cover them; ſo doing, even to the brim of the pot, which muſt be filled.

ed with the powder, the ſame thickneſs as was in the bottom, *viz.* the thickneſs of a finger tranſverſed. Laſtly, put on the cover, without any ſpiracle, if for vulgar cement: but if for the *Regale*, the cover muſt have a ſmal hole. The fire muſt be adminiſtred to it for twenty four hours, ſo as the pot may be always red. The work ended, cleanſe the plates with an Hares foot from the powders adhering, and waſh them in wine, and dry them.

The moſt perfect cement of all, is that which follows: Melt gold with double its weight of moſt pure Copper, reduce them to plates or leaves, as thin as paper; which cement for forty or fifty hours in a ſtrong fire; making lay upon lay, as in *Regale* cement is ſaid with flour of Tiles, common ſalt, *Colcothar*, *Ærugo*, and a little ſalt armoniack, mixed with ſtrong vinegar. In this Examen, all the Copper vaniſheth, the incombuſtible ſulphur, and Tincture thereof remaining in the ſubſtance of the gold; according as *Geber*, in Chap. 18. of fornaces, witneſſeth; who ſaith, that from Copper a moſt clean, tinging, and fixed ſulphur is extracted.

Metallick Bezoardick.

Diſſolve of moſt pure gold in Philoſophick water ℥ij. to which add drop by drop of gummoſe Liquor ſeven times rectifyed ℥j. In mixing theſe will be great ebulition. Place the veſſel upon hot aſhes for three or four hours. Then precipitate the matter in common water, and waſh it often; Laſtly with cordial water, and then dry it. And you will have a ſtone of wonderful virtue: of which ſix grains egregiouſly provokes ſweat.

Ceraunocryſon Diaphoretick.

Diſſolve moſt pure *Sol* in Phyloſophick water, and digeſt it for one night in ſand. Then pour upon it oil of Tartar drop by drop, until the ebulition ceaſe, and the *Calx* of gold be precipited to the bottom; which muſt be edulcorated with many ablutions, and with moſt gentle fire dryed. Doſe three or four grains.

Of this Diaphoretick, another more excellent may be prepared in this manner.

℞. Of this *Ceraunocryſon* five or ſix grains, and put it in a ſmal ſilver veſſel, and on it pour the beſt rectifyed ſpirit of wine, which ſet on fire, and hang a Chryſtaline glaſs with a ſufficiently large Orifice over it. As ſoon as the ſpirit of wine ceaſeth to burn, the *Ceraunocryſon* performs its office, and a certain earthy part will be ſublimed to the ſides of the glaſs. Repeat this Labour four or five times, and waſh the glaſs with ſpirit of wine, that the *Calx* may ſettle to the bottom, which muſt be dryed. Doſe one or two grains.

CHAP.

CHAP. XVII.

Of Salts.

The way of extracting eſſential Salts from Herbs, without calcination.

℞. A Great quantity of *Carduus benedictus*, bruiſe it in a ſtone or wooden mortar, afterward in a large veſſel, with a great quantity of water boil it, until half be conſumed; then ſtrongly expreſs it, and ſtrein the expreſſion. The Colature again boil to the thickneſs of Liquid honey. This juice of *Carduus benedictus* put into a glaſs veſſel, and ſet it in a cold place for certain days; & in the bottom of the veſſel, a chriſtaline ſalt angular, like ſalt gem, will be generated. From which pour off the juice, waſh it with water of *Carduus benedictus*, and when dryed, diligently keep it. For it is a moſt excellent Remedy in the Peſt; if two grains more or leſs be exhibited in ſpirit of *Carduus benedictus*, they abundantly provoke ſweat. By the ſame reaſon, and in like manner a ſalt may be extracted from other herbs, which ſhall in virtue far exceed that which is made of the aſhes of herbs.

Eſſential Salt, Cream, or Chryſtals of Tartar.

℞. White Tartar of *Montiſpelienſis*, which is the beſt, reduce it to powder, and in a large braſs or iron Kettle boil it with a great quantity of water, until half the water be conſumed. Then remove it from the fire, and if you will paſs it through *Hyp-*

pocrates

pocrates ſleeve or a Linnen cloath, into a firm earthen veſſel. When it is cold, pour off the water by inclination: and the Salt adhering to the ſides of the veſſel, by frequent affuſion of water gather; being ſeparated from the feces.

And again as above, boil it, waſh it, ſeparate it from the feces, and dry it. Then reduce it to powder; of which the Doſe is ℈j. in a little broth, or appropriate medicine. It hath virtue of breaking thick and tartarous humours, and of opening obſtructed paſſages.

Salt, or Aſkali of Imperatory.

Calcine the herb dryed to a whiteneſs, extract the Salt with diſtilled water of the ſame herb, or elſe with common water digeſting it for one night. Afterward pour off the water by inclination, taking heed you diſturb not the feces. Pour on other water the ſecond and third time, digeſting and evacuating, without diſturbing the feces as before. Then filter and coagulate the three evacuations together, If the coagulum be not ſufficiently white, calcine in a crucible to a redneſs, taking heed it melt not, then reſolve, filter, and coagulate it.

Thus is Salt extracted from all herbs; but in ſuch calcination, the volatile or eſſential ſalt periſheth; and the elemental ſalt only remains.

Salt of Tartar.

Strew or ſpread Tartar in an earthen unglazed veſſel, with a flat bottom, the thickneſs of one finger. Afterward reverberate it to a whiteneſs, for the ſpace of five or ſix hours, with a fire ſo moderate

to

to prevent fusion, that the vessel may be but just Red.

The Tartar thus calcined to a whiteness, pour out into common water, digest it, then filter and coagulate.

Salt of Corals.

This is done by digesting Corals beaten small, in vinegar thrice distilled for one night. Afterward the solution is filtred, and the vinegar evaporated to a dryness. So the salt of Corals remains in the bottom of the vessel.

Its virtues are excellent; for it cleanseth the bloud throughout the whole body, restores the prisine vigour of health; Fluxes of the Womb, and Belly, and Hemroides it stops; It strengthens the heart, and stomach; removes obstructions of the bowels, and dissolves congealed bloud. It is profitable in the Dropsie, Convulsions, Paralysie, Stone, Suffocation of the Matrix, if exhibited with water convenient against preter-natural affects. Dose, from ten grains, to ℈j. or ℈ij. with respect to age, and the vehemency of the disease.

Salt of Colcothar.

The Colcothar is put into Rain water, and the salt by digestion for one day or night comes forth into the same, is filtred, and coagulated. If the remaining redness be five or six times again calcined, and the saltness every time washed out; it at length will be sweet, and is called sweetness of vitriol, which will be the greater, if the Colcothar be prepared of vitriol of *Venus*, and it is a present Remedy in malignant Ulcers.

Voma-

Vomative Vitriol.

Diſſolve white Vitriol in common water, filter and coagulate it; repeat the ſame Labour the ſecond time: After which, diſſolve it in Roſe water and coagulate.

Otherwiſe.

Diſſolve white Vitriol in diſtilled water, filter it, & in a glaſs veſſel exhale the water, until it contract a skinnyneſs. Then ſet the veſſel in a cold place, that it may be Cryſtallized. The Cryſtals ſeparated, the remaining humour evaporate, and again ſet to Cryſtallize as above; and this Labour repeat the ſecond time. Thirdly, diſſolve the Chryſtals in Roſe water, and as before exhale and Cryſtallize; then with gentle fire dry the Cryſtals.

Doſe from ℈j. to ʒſs. in a draught of Wine or Beer, or with Conſerve of Roſes. It happily operates in Fevers, Affects of the Ventricle, Catharrs, Maw-worms, Peſt, *&c.*

Salt, or Vitriol of Mars.

℞. Spirit of vitriol, or oil of ſulphur *per Campane*, although not rectifyed ʒj. With this mix ʒij. of common water. Unto this mixtion, add ʒj. of filings of Iron; all which, in a cloſe veſſel, place in hot aſhes, that it may boil very gently, for the ſpace of ſix hours. Afterward permit it to cool; and in the veſſel you will find vitriol generated green and ſplendid; which is diſſolved in heat, and in cold coagulated.

Salt,

Salt, or Vitriol of Venus.

Reduce calcined Copper, or ſcales of Copper to a ſubtile powder, which digeſt in diſtilled vinegar for one day natural. The tinged vinegar by inclination pour off, and repour on other, ſo often as til it be no more tinged. The evacuations filter and evaporate, or diſtil off three parts; what remains in the bottom of the veſſel, ſet in a cold place; and ſo a green, obſcure, ſhining vitriol, will be generated.

Otherwiſe.

Plates of Copper, with a like quantity of ſulphur beaten, as is ſaid in calcination of *Venus*, are reduced to a ſubtile powder; and in an earthen pot with the beaten ſulphur, are calcined; by a continued ſtirring the mixtion with a rod of Copper, til all the ſulphur be burnt. The *Calx* again is ground, and with an eighth part of its own weight of ſulphur beaten ſmal, calcined. Then is it again ground, as before, and project into hot water, being often ſtirred with a ſtick or Copper rod, until the *Calx* be ſetled to the bottom, and the water wax cold; which being filtred, is evaporated to a fourth part, and put in a cold place to produce Azure Cryſtals, or elſe by evaporation coagulated.

Salt of Saturn.

Put the *Calx* of Saturn, or Minium, in diſtilled vinegar, or the phlegm thereof; digeſt it for one day natural, often ſtirring it: then evacuate the *Menſtruum* by inclination, and pour on other until all the Saltneſs of Saturn be abſtracted. Filter the evacuations, and in aſhes or ſand coagulate them. If vinegar be the third time diſtilled from Salt of Saturn, with cohobations; and afterward ſpirit of Wine be poured on, and thrice cohobated: the Salt acquires ſo admirable a virtue in healing divers Diſeaſes; as if ſix grains be given in white Wine in the Peſt, it cures the ſick in twenty four hours. In the Dropſie three grains are given in white Wine four days together. In the Cholick ſix grains with whitewine. In the Leproſie alſo ſix grains, in water of Fumitory, continually for eighteen days together. This Sugar inwardly taken, by its coldneſs, doth alſo extinguiſh Venereal Luſt; and is therefore profitable for thoſe who are devoted to a ſingle and Virgin Life. Externally uſed, it wonderouſly operates in malignant Ulcers, Corroſive, and Cancrous; Cancer, Woolf, and ſuch like. Alſo it is a moſt excellent Remedy againſt putridneſs of the mouth, and Ring-worms, Blaſtings, Inflammations, Tumors, and red Pimples of the face, if applyed with convenient Oils or Waters.

CHAP. XVIII.

Of Flowers.

Flowers of Benzoin.

GRind *Benzoin*, and put it into a round pot, which close with a double brown paper, wrapt up in manner of *Hyppocrates* sleeve; and administer fire apt for sublimation, gathering the snow like flores often.

These in the Asthma, and all diseases of the Lungs, are very profitable. Dose ℥ss. in convenient Liquors or Syrups. It is also a principal Remedy, for bunches, and redness of the face.

Flowers of Sulphur.

These are prepared, by mixing equal parts of Sulphur and Colcothar perfectly rubified and dryed; and so mixed by subliming, as shall be taught in sublimation of Antimony; (but this operation is performed in the space of eight hours, nor is so much fire required, as in Antimony.) They must the second time be sublimed with Sugar candid alone, that they may be more efficacious in the Asthma, and other affects of the Lungs. Also this preparation of flowers, is made by mixing one pound of the flowers of sulphur, with one pound and ½ of flour of Tiles. Or by adding to one pound of sulphur, of Colcothar, and salt decrepitate, of each ½ a pound. Or else *per se*, they are sublimed without any other addition.

These

These flowers do powerfully resist putrefaction; and therefore in the Pest, the weight of ʒj. either in *Carduus benedictus*, Treacle, or Syrup of Citron, or else in water of *Melissa*, is profitably used, as well for Preservation, as Curation. They also preserve from Fevers, and Epilepsie. In *Lues Venerea*, they provoke sweat: In all diseases needing exsiccation, they help; and are very beneficial in all Affects of the Lights, the Asthma, the Cough, as well of long continuance, as what is newly taken; Catarrhs flowing to the breast, Pleurisie, Cholick, Imposthums, and Putrefactions of the body.

Flowers of Antimony.

Choice Stibium reduced to a subtile powder, and put into an earthen pot, with a blind head super-posited, in the top of which must be an hole, for exhaling the humid spirits, and a moveable stoppel fitted to the hole; must be sublimed according to Art, administring fire gradually for ten or twelve hours, for receiving white flores; but for Citrine, twenty four hours, and for the red flores, thirty six hours, continuing, and encreasing the fire.

Sublimate Mercury.

℞. Mercury purged with prepared Salt and Vinegar, and passed through a skin. Vitriol rubified. Prepared Salt, of each one pound. Salt Nitre ℥iiij.

Grind and mix them together in a stone Mortar, with a little Vinegar, so long as until the Mercury no more appear Living. All being well mixed, put into a cucurbit Luted; with an Alembick,

having a ſhort neck annexed, with Recipient adjoyned; adminiſtring fire by degrees artificially, for eight or ten hours. The *Aqua fortis*, which firſt comes forth keep. For the ſecond ſublimation, to one pound of ſublimate, add of Salt prepared ℥xij. and of Vitriol ℥iiij. If the third time, ſublime it with ſalt only.

A ſweet Sublimate.

℞. Of Mercury purged as above, ℥vj.
Mercury ſublimate, ℥viij.

Grind and mix them together with one pound of Colcothar, well and perfectly rubifyed. Then ſublime the mixture from a convenient veſſel, placed in ſand for the ſpace of five or ſix hours. The ſecond time, ſublime it with ½ pound of Colcothar. The third time, *per ſe* only. Inſtead of Colcothar, prepared Salt may be uſed, if any one be ſo minded. The ſublimations ended, reduce the maſs into a ſubtile powder, which waſh with Roſe water, and dry it. Doſe, from twenty grains, to thirty in *Lues Venerea*.

Otherwiſe.

℞. Of Mercury ſublimate, ℥vj.
Silver foliate, ℥ij.

By grinding mix theſe together, and ſublime them in ſand. The veſſel cooled, ſeparate the volatile part; and grind what is fixed, and Cryſtaline; and mix it with the feces reſiding in the bottom. The ſecond and third time ſubliming as above, and

in

in the end waſhing the ſublimate when dryed, keep it for uſe. Doſe, from ſix grains, to eight or ten. It purgeth gently.

Manna of Mercury.

Diſſolve Mercury in *Aqua fortis*. Afterward precipit it in Sea water; and from a cucurbit placed in ſand, diſtil it, toward the end encreaſing the fire, that the Mercury may be ſublimed to the ſides of the veſſel. The veſſel cooled, and the feces reſiding in the bottom of the veſſel, removed, gather the ſublimate apart. And again in the ſame water diſſolve and diſtil it, as above. So will you have the Celeſtial Eagle, more white than ſnow, the uſe whereof is chiefly in Venereal diſtempers. Doſe, from ten to fifteen grains.

It purgeth only by the inferiour parts.

CHAP. XIX.

Of Magiſterys.

A Magiſtery is, when the mixt body is ſo prepared by Chymical artifice without extraction; as all its homogeneal parts are preſerved, and deduced to a more noble degree, either of ſubſtance or quality, the exteriours of impurity being ſegregated.

Magistery of Tartar.

℞. Oil of Tartar, made of the resolved and purifyed Salt, ℥iij. Spirit of Vitriol ℥i. which instil upon the Oil of Tartar, into a large glass, drop by drop; and it will be a most white Coagulum. The supernatant humidity remove by gentle heat, unto the dryness of salt: upon which distil spirit of wine three or four times. And so you will have a white fixed Vitriolate Tartar.

Its use is in all obstructions of the bowels; in the Stone, Nephritick dolour, Jaundies, retention of the Menses, melancholy, hardness of the Spleen, Fevers, and the Dropsie, if conveniently adhibited.

Dose, from ℈ss. to ℈j.

Magistery of Pearls, and Corals.

Dissolve Corals or Pearls beaten smal, in water made very sharp with spirit of vitriol. Digest it for one night, and upon the Solution, first filtred, inject oil of Tartar drop by drop, til it be like milk. Then pour upon it common water, and digest it; and so it will be precipited in bright powder to the bottom of the vessel. The water must be separated, and other poured on three or four times, until all the Acrimony be separated. Then dry the powder, and keep it for use.

Margarits in temperament, and virtue, do very much emulate Gold; and therefore do comfort the vital spirits of the heart; and remove palpitation of the heart, deliquiums of the mind, and Vertigo's. And ought deservedly to be mixed with all Cordial medicaments. They excite *Venus*, resist melancholy,

choly, dealbate the Teeth, comfort the memory, and corroborate the young in the womb. They dry up all depraved humours in the body; and preſerve all parts of the humane body from corruption. The virtues of Corals, are ſpoken of in the Salt of them.

Magiſtery, Milk, Cream, or Butter of Sulphur.

℞. Of flowers of Sulphur, ℥j.
Salt of Tartar, ℥iij.

Mix them, and pour upon them of common water three pound, digeſt all in ſand for one day natural; with ſuch heat, as toward the end the water may almoſt boil: afterward filter it hot through brown paper, and upon it pour a ſufficient quantity of diſtilled vinegar; ſo the milky Cream of ſulphur will by little and little ſettle to the bottom. Separate the Diſſolvent by inclination, and with frequent ablutions edulcorate it. Laſtly, digeſt it with Cordial water, and dry it. And thus will you have a moſt white Milk, or Cream of ſulphur: Which, is the Balſom of the primogeneal humidity. It comforts the natural vigour, purifies the bloud, Diſeaſes of the Lungs, as the Aſthma, Cough, and Ptyſick it cures. In drying up Catarrhs, in removing windineſſes of the Stomach; in the Sciatica, and Gout, it is commended as exceeding profitable. It alſo is an egregious preſervative from the Apoplexy, Peſt, Leproſie, and Convulſions of the Nerves. In Hectick Fevers, by comforting it profits. So much only of the powder, being mixed with ſpecifick waters, as ſhall be ſufficient for tinging

them with a white colour. One ſpoonful is given in the morning, and before exhibition, accurately mixed with the humid vehicle.

Otherwiſe.

It is alſo made, by mixing ſulphur beaten, with clean ſand or glaſs beaten ſmal, of each equal parts: and by diſtilling by Retort in a moderate fire, applying a Recipient containing diſtilled vinegar. And ſo the diſtilled ſubſtance of the ſulphur will be precipited into a white powder, which dry, and keep for uſe.

This Antidote Prince *Auraicus* uſed againſt the Peſt.

Otherwiſe.

Milk of ſulphur is likewiſe made, by mixing ſulphur and ſand with *Aqua vitæ*, and diſtilling it in aſhes by Retort. It is good againſt malignant Ulcers, venereal Cancers, Meaſels, Warts, *&c.*

CHAP. XX.

Of ſolid Tinctures, and Panacæa's.

Tincture of Antimony.

MAke a *Lexivium* of aſhes of Harts-eaſe, *Calx-vive*, and common aſhes, of each a like quantity. In which diſſolve Liver of Antimony, digeſting it in ſuch an heat of ſand for one night, as it may almoſt boil. Separate the Tincture, and filter it. And, if you pleaſe, by vinegar, precipit it into a yellow powder, and by many ablutions edulcorate it.

Pana-

Panacæa of Vitriol.

Diſſolve blew vitriol in hot diſtilled Rain water, which, being the third time filtred, by gentle heat of Baln. evaporate to a skinnyneſs. Then pour the remaining Liquor hot into a Leaden veſſel, in which you muſt firſt place ſmal ſticks tranſverſed. And ſo leave it in a cold place for three days, that it may produce green Cryſtals, which ſeparate, evaporate the remaining Liquor, and put it again into the ſame veſſel to be Cryſtallized; repeating the ſame Labour ſo oft, as until all the Liquor ſhall be Cryſtallized.

This vitriol, of the colour of an Emrauld, by theſe Solutions, and Coagulations, perfectly purifyed, reduce to a powder very ſubtile; which in heat, not exceeding the heat of *Sol* in the Summer ſeaſon, dry in the ſpace of five or ſix days, until within, and without, it appear candid. Then diſſolve it in diſtilled water, filter it, what is undiſſolvible, caſt away; coagulate it in a Leaden veſſel, and dry it to a whiteneſs in gentle heat, as above. Repeating this operation unto the third time, or until in diſſolution, nothing remain undiſſolved. This candid vitriol put into a firm veſſel, ſealed with *Hermes* Seal: which ſo place in gentle fire of aſhes, as the heat may not exceed the Summers heat. The tenth day, it will wax yellow; the twentieth day, it will be reduced to an *Alcohol*, and be moſt red like bloud. Break the veſſel, and put it into an high cucurbit, and upon it pour vinegar thrice diſtilled, ſo much as may ſtand above it, at leaſt four fingers. Apply a blind head, and digeſt it in a warm Baln. for four days, every day ſtirring it with a clean wooden ſpatula.

tula. The veſſel cooled, what is tinged pour off, and pour on other vinegar, digeſting, ſtirring, and evacuating it as above; repeating the ſame Labour, til the vinegar ſhall attract no more Tincture. What ſhall remain in the bottom, reject as uſeleſs.

The tinged vinegar by gentle heat of Baln. diſtil to a dryneſs. In the bottom will remain a Red powder, which alſo the third time in the ſame vinegar, diſſolve, digeſt, evacuate, diſtil, and dry. Then put your moſt Red powder into a Retort, with a large Receiver annexed, adminiſtring fire gradually. Firſt the ſpirit comes forth yellow, afterward moſt red: continue the fire in that degree, until the ſpirits appear white. Then ceaſe diſtilling, and cool the veſſel; in the bottom of which, you will find a perſpicuous, pure, and moſt bright earth; which, with the above ſaid ſpirits, imbibe by little and little, digeſting, and imbibing, until the ſpirit and ſoul be reſtored to their proper body.

Then coct this bleſſed earth in a veſſel Hermetically ſealed, and placed in heat of *Athanor*, for forty days, until it be fixed.

Doſe, from three grains to five, eſpecially in deplorate diſeaſes.

A Solar Diaphoretick Panacea. Stomachus Struthionis of Paracelſus.

℞. Of Philoſophick water, one pound.
Mercury ſublimate, ℥ j.

Mix them, and in this water diſſolve only ſo much Mercury as can well be diſſolved in it. The diſſolution ſlowly proceeds, therefore is there need

of

of digeſtion. To the ſolution, add of Gummoſe Liquor ℥ij. mix and diſtil them, and that diſtillation reiterate twice or thrice, until after the diſtillation, no feces be remaining.

In all theſe diſtillations, ſublimate Mercury aſcends, which every time re-put into the water.

With this water, the Quinteſſence of Metals, Minerals, and Marcaſites is extracted.

Spirit of Wine Tartariſate.

Diſtil the dryed feces of wine, after the manner as *Aqua fortis* is diſtilled. The water and oil ſeparate, and keep. In the mean while, calcine the feces to a whiteneſs, which, with the above ſaid oil, imbibe; and as before, diſtil and calcine; repeating this Labour ſo often, as until the oil be clear as water, and ſweet, not ſavouring of aduſtion. So you will have a Tartariſate Quinteſſence, which removes all corroſiveneſs from Metals.

Sublimation of Sol.

℞. Of *Sol* purged with Antimony, and cut into very thin plates, or inſtead thereof

Of foliate *Sol*, ℥ij.
Of *Stomachus Struthionis*, ℥iiij.

Diſſolve and diſtil by Alembick with ſtrong fire toward the end, even to ſublimation, that the glaſs may be red hot. The veſſel cooled, cohobate, and diſtil it thrice, every time ſeparating what ſhall be ſublimed. The fourth time diſtil away the phlegm gently, and anew pour on other ℥iiij. and do as before, until the whole water be conſumed, and all the

the body ſhall be ſublimed, unto the whiteneſs of the exalted Eagle; that is, of ſublimate Mercury. Then praiſe GOD. Again repoſit the whole ſublimate with the phlegm, diſtilling away the phlegm, without aſcenſion of the ſpirit.

Mercurius Vitæ.

This is made, as in the *Archidoxes* of *Paracelſus* in the Book *of Secrets*, with one part of Antimony, and one part (or according to others, two parts) of ſublimate Mercury. Afterward it is rectifyed, and diſſolved upon a Marble or Table of glaſs; then it is congealed, by diſtilling away the phlegm, and a little of the acidneſs; until drops falling in the phlegm, begin to be precipited. Then the Receptory is removed, and another applyed, and diſtillation urged with moderate fire. This Labour muſt be four times repeated; and the fourth time it will be a clear and white maſs.

The Conjunction of ſublimate Sol, and Mercurius Vitæ.

℞. Of *Sol* ſublimate, or the oil of the ſame aforeſaid, without phlegm one part.
Of *Mercurius Vitæ* clarifyed two parts.

Mix them together, and with gentle fire diſtil the ſpirit. What ſhall remain coagulated, diſſolve upon a Marble. Repeating the Solution, and Coagulation the third time. Then upon this matter pour two parts of the Tartariſate Quinteſſence, diſtilling it by Alembick to a dryneſs. Repour on other, and diſtil it, doing this ſo often, as until the eſſence

ſhall

ſhall be diſtilled off ſweet, as when firſt poured on. Which being done, upon one part of this medicine pour four parts of ſpirit of wine without phlegm; digeſting it until the ſpirit be conſumed. So you will have the perfect conjunction of *Sol*, and *Mercurius Vitæ*. The Doſe of which is four drops in white Wine. It is exceeding profitable in deſperate diſeaſes, and in thoſe wherof the cauſe is occult.

The End of the Second Book.

TYRO

TYROCINIUM CHYMICUM:

OR,

CHYMICAL ESSAYS.

Book the Third.

CHAP. I.

Of Quinteſſence.

Of the Quinteſſence of humane Blood.

THE denomination of Quinteſſence, is variouſly taken. Sometimes it ſignifies any Chymical Species, which hath put off the Elementary groſſeneſs of matter, and corpulent feces: and is oppoſed to a Magiſtery, in which almoſt the whole bulk of its ſubſtance remains, only it is exalted, and purifyed. Sometimes alſo, as we here take it, it denotes an Æthereal, Celeſtial, and moſt ſubtile ſubſtance; taken from the three principles of any mixt body diſſolved, freed by various Chymical Operations from their Elementary, Senſible, Corruptible, and Mortal qua-

quality, and coagulated either into one ſpiritual body, or a corporeal ſpirit. It is by ſome called Medicine, κατ' ἐξοχὴν; that is, by reaſon of its eminency. By others Elixir, by reaſon of thoſe famous virtues, it exerciſeth in preſervation of the humane body, from ſundry diſeaſes. By others, Heaven, for a double reaſon; Firſt, becauſe, as Heaven conſiſts not of the four Elements, but is made of a certain Æthereal matter, and as it were a fift Element; and is not obnoxious to corruption; ſo alſo the true Quinteſſence is ſeparated from all feces of Elements; and although it be not plainly incorruptible, yet it is reduced to that ſubtility, tenuity, and ſpiritual ſimplicity, that it ſeems to contain in it ſelf nothing of heterogeneity, by which it ſhould be corrupted. Secondly, becauſe, as Heaven powerfully acts on theſe ſublunary things, contributing Life to all, and conſerving them: ſo alſo this Quinteſſence conſerves the health of the humane body, prolongs youth, retards Age, and expelleth every diſeaſe.

The Quinteſſence of humane bloud, is in this manner prepared. ℞. A great quantity of the bloud of ſound men in the flower of their Age. Put it in Circulatory veſſels of a convenient magnitude, which place in *B. M.* continually boiling until the Dragon ſhall have devoured his own tail. The veſſels cooled, take out the matter, which will be like Liver, and cut it to pieces very ſmal. And in high Cucurbits, with the ſame heat of Baln. by diſtillation ſeparate the aqueous element or phlegm. The diſtilled Liquor repour upon its earth, and ſet it in the former circulatory veſſels, in a boiling Baln. for ten days as before. Repeating the ſame proceſs five times; and the laſt time keep all the diſtilled

plegm.

phlegm. The veſſels being cooled, take out the matter, and put it into a large Retort, applying a capacious Receiver; in aſhes diſtil off the air by fire gradually encreaſed. The ſmal and thin clouds in the recipient diſſolving, intend the fire ſo, as the Element of fire may alſo come forth in form of Red or Purple oil. Toward the end a little Salt armoniack will ſublime it ſelf. The veſſels being cold, ſeparate the air or ſpirit from the fire or oil; either by gentle diſtillation in Baln. or by a Separatory. The ſpirit with the Salt armoniack, again pour upon the feces, digeſt them for three days, then by a new Retort diſtil off the ſpirit, toward the end giving fire apt for ſublimation, that the whole ſpiritual ſalt, or at leaſt the greater part thereof may be ſublimed, and mixed with the ſpirit in the Receptory. Again pour new ſpirit upon the feces, digeſt and diſtil as above; ſo often, as until the earth be deprived of its ſoul; which you ſhall know, if when put upon a burning plate, it fume not.

Note, That before the ſpirit be animated, it muſt be ſeven times rectifyed, every time ſeparating the phlegm and feces: and part thereof reſerved for preparing the diſſolvent, as afterward ſhall be ſpoken.

Calcine the black blacker than black in a reverberatory fornace with moderate fire, in a veſſel every where cloſed, for the ſpace of five days, until the blackneſs be turned to a yellowiſh whiteneſs, and ſo into a red colour. Then will the earth be apt for receiving its animate ſpirit. Digeſt it by Baln. as long as ſhall be ſufficient, afterward by gentle diſtillation ſeparate the inſipid humidity. Which being done; revert upon the earth a ninth part of its animate ſpirit, digeſt and diſtil as before. Then give it the

e ghth

eighth part of the animate ſpirit; afterward the ſeventh, the ſixth, the fifth, the fourth part; ſo long with the fourth part imbibing it as til the earth be encreaſed to double of its own weight, before imbibition. And this is what *Avicen* ſaith, know, that the earth muſt be nouriſhed, firſt with a little of its own water, and afterward with more, as is ſeen in education of Infants. Therefore often grind the earth, and leiſurely imbibe the ſame, from eight days to eight days. Decoct it, and afterward moderately calcine it in fire. And let not this Labour ſeem tedious to thee, in ſo many reiterations; for the earth brings not forth fruit, without frequent moiſtnings. Yet be wary leaſt you too haſtily imbibe the earth, but do it leiſurely, by little, and a little, and with long contrition after the earth is dryed. Wherefore in this the weight is diligently to be obſerved, *viz.* leaſt too much dryneſs or ſuperfluous humidity corrupt the work. And much coct it by aſſation, as by imbibing the diſſolution requires. Thus far *Avicen.* Whence alſo *Geber* ſaith: Therefore from the multiplicit reiteration of imbibition and aſſation, the greater part of its aqueouſneſs is taken away; and the reſidue by ſublimation is removed.

Put the aforeſaid earth into an high cucurbit, having an Alembick, and receiver annexed; the junctures being very firmly cloſed, ſo as nothing may reſpire; give to it fire of aſhes for the ſpace of three days, until the clean and white fume aſcend, and cleave to the ſides of the cucurbit like Talck. This is that which † *Clangor Buccinæ* ſaith, therefore as much as you can ſubtiliate that body, and coct it with clean Mercury; and when the body ſhall have drawn, and concluded

† A Phyloſophik book ſo called.

in it self some part of the Mercury; subtiliate it with as quick and strong fire as you can, until it shall ascend in the likeness of powder most white as snow, adhering to the sides of the vessel. But the ashes remaining in the bottom, is the feces, and vituperate *Scoria* to be cast away, having nothing of life in it.

Of the aforesaid Meteorisate Mercury ℞. ℥j. Mix it with ℥vij. of the rectifyed spirit not animate. Digest it for two dayes in B.m. then distil it by ashes; afterward by Baln. with repeated cohobations, until no feces be left. Then circulate it for forty days. Its use is for extracting Tinctures of Metals, and stones. Of the same Mercury and its oil, is made an Elixir for expelling the most desperate diseases; in this manner. ℞. Of this Mercury ℥j. unto which add an eighth part of its own weight, of its proper oil rectifyed; decoct them in heat of *Athanor* for eight days: afterward with a sixt part, and then with a fift part, reiterating the former labour so often, as until the matter become thick as syrup, and by decoction will be no further hardned. After this digest it forty days, and it will be a most red stone; of which the Dose is one grain or two in appropriate Liquor.

CHAP. II.

Of the Quintessence of Wine.

IN circulatory vessels of a just magnitude, digest a good quantity of rich wine in horse dung for a moneth. Then in high cucurbits distil off the spirit, in *B. M.* which afterward rectifie seven times, each time separating all its phlegmatick humour. Distilling it so, as in the seven times, from forty pound of wine,

wine, you may ſeparate one pound more ſpiritual than the other (for what is diſtilled between the ſpirit and the phlegm, is *Aqua ardens.*) Keep the ſpirit in a glaſs veſſel (of ſuch a magnitude as it may be half full) firmly cloſed, that nothing may reſpire in a cold place. In the mean while diſtil the remaining phlegm to the conſiſtency of Liquid honey. What is diſtilled off revert upon the feces; and again by gentle heat of Baln. draw off three parts. Then take out the cucurbit, and ſet it in a cold place, that the matter may Cryſtalize; the Cryſtals waſhed from all filth, ſo often diſſolve and coagulate, as until they reſemble the Ice of moſt pure water. Now, if you deſire by force of Art, to have a fat and combuſtible oil from wine, diſtil the phlegm, ſeparated from the Cryſtals in Baln. unto the thickneſs of Liquid honey: afterward in a retort placed in ſand, force it with ſtrong fire. Firſt comes forth a water mixed with yellow oil, then a red oil; Laſtly Roſin.

Unto the Cryſtals beaten very ſmal, pour the ſpirit above reſerved; digeſt them in Baln. for three days, afterward diſtil off the ſpirit in ſand: repeating the ſame proceſs ſo often, as until the ſpirit be perfectly impregnated with its proper ſoul, and the body made ſo very dry, as if put upon a glowing plate, it will yield no fume. Then on the body, firſt calcined according to Art, revert an eighth part of its own weight of the animate ſpirit, digeſt and diſtil it as before, then give it a ſixth part of the ſpirit; afterward a fifth, and then a fourth, ſo often continuing the imbibition with a fourth part, as until the greater part of the body put upon a burning plate, ſhall vaniſh into air. Then is fulfilled that which *Morienus* ſaith: This alſo it behoves thee to

know, that the ſoul ſoon hath ingreſs into its own body, which with another body, can by no means be conjoyned. Having this ſign, cover the veſſel, and to it placed in aſhes, adminiſter fire for the ſpace of two days, until the vegetable ſulphur adhere to the ſides of the veſſel like Talck. Of this ſulphur ℞. ℥j. Of the pure ſpirit ℥ iij. Mix and digeſt them for one day natural, then diſtil them in aſhes, cohobating often, until the whole body ſhall aſcend. After which, twice diſtil it in a boiling Baln. and circulate it for ſixty days. And having ſeparated the *Hypoſtaſis* (which will adhere about the bottom of the Pellican) keep the Quinteſſence of wine for curing infinite diſeaſes, to be uſed both internally and externally.

Alſo this Quinteſſence of wine may be perfected in a ſhorter ſpace of time. Yea when I did this, in the preſence and ſight of certain of my diſciples, in the ſpace of five weeks I finiſhed it: and with the ſame extracted a moſt red Tincture of Gold. For, as *Geber* witneſſeth, there are many ways to the accompliſhing one effect, and one intent: But

In this place, I can never ſufficiently admire, why *French* and *Germane* wine circulated, have not that admirable odour, which *Baptiſta Porta* attributes to *Neapolitan* wine, in theſe words.—Then open the mouth of the veſſel, and if ſuch an admirable fragrancy iſſue out, as with it nothing may be compared; know that you are come to the deſired end. But if the odour or colour anſwer not, cloſe the veſſel again; and re-place it to be circulated, until you ſhall have the aforeſaid ſign. Nor is the *Italian* ſpirit of wine endued with ſuch an odour, as *Rubeus* teſtifies. For he in the ſecond Chap. of the ſecond Section of his book of diſtillation, in this manner writ-

writeth. I would that good Man, and moſt excellen Phyſician, *Euſtachius Sancto Severinas*, had now lived. For he (not to ſpeak of my own knowledge) could have evinced, by his experience moſt diligently acquired, that *Aqua ardens*, if circulated, not only for a moneth, but for two or three moneths; yea, for a whole year, as *Raymund* preſcribes, can never be deduced to that ſweetneſs of odour, but rather will be found more hot, and be rendred more acid; as who ſo will, may eaſily prove; and reaſon it ſelf by obſervation of the fire and motion, perſwades the ſame. But *Raymund* did not underſtand, or intend that of ſimple and pure *Aqua ardens*, as ſome of late have thought; but of that, in which the metallick body was diſſolved. For in the ſecond Canon of the firſt book, he thus writeth: But this Quinteſſence ſo circulated and rectifyed, will not poſſeſs ſuch an odour, unleſs the body be diſtilled in it. Whence it appears, that *Porta* drew not ſuch a *Quinteſſence* of wine from his Labour in the fire, but from the writings of *Lully*, and *John de Rupeſciſſa*, evilly underſtood.

CHAP. III.
Of Quinteſſence of Corals.

FIrſt a great quantity of moſt ſharp vinegar, muſt be diſtilled with ſeparation of the phlegm, for this work wholly unprofitable. Diſtilling it nine times upon the former feces, until you ſhall have about a hundred pound of vinegar moſt perfectly rectifyed *per* Baln. Alſo you muſt have thirty pound of red Corals, reduced to a moſt ſubtile powder; likewiſe many large veſſels with long necks, in every

very of which one pound of Corals muſt be put; unto them pouring on of vinegar leiſurely, and at times, to prevent ebulition, ſo much as may ſtand above them four or five fingers: then they muſt with the vinegar be digeſted in Baln. for one day natural, or until the vinegar wax ſweet, and be inveſted with a yellow colour. Which being done, pour off the *Menſtruum*, and repour on freſh; repeating the ſame Labour, til what is diſſolvible be diſſolved. Put the evacuations in high cucurbits, and abſtract the *Menſtruum* by heat of Blan. then to every one pound of the ſalt, pour ℥ij. of vinegar, and diſtil it; which being done, again add ℥iiij. after ℥vj. and ſo leiſurely, and at times nouriſhing it, and at length diminiſhing the infuſions from ounce to ounce, until the vinegar be diſtilled off as ſharp as it was when firſt poured on. All the inſipid diſtilled phlegm, muſt be kept. And the ſalts impregnated with the ſalt armoniack of vinegar, muſt be fermented in vapour of an hot Baln. and there left until a ſtrong odour and black colour appear, which are the ſigns of true putrefaction. When theſe ſigns ſhall appear, put the reſolved ſalts while warm into retorts; becauſe in cold, they will preſently be congealed: and by a vaporous *B.* or aſhes, ſeparate the phlegm, until white vapours or fumes ſhall be ſeen to ariſe. Then ceaſe the diſtillation there, and continue it by ſand in a cloſe Reverberatory, until all the ſpirits ſhall be come forth, and an oil red as bloud ſhall iſſue out drop by drop. Reſerve the feces for the uſe hereafter mentioned. All the diſtilled Liquor being moſt odorate, and like *Aqua ardens* eaſily conceiving flame, put into high cucurbits, and by gentle heat of Baln. ſeparate from the phlegm; and in a cold place in glaſſes well cloſed, keep them

them. Afterward encreaſe the fire, and urge the phlegm, which ſeparated from the oil, alſo ſet by for uſe. In the mean while calcine the above reſerved feces in fire of *Athanor*, for the ſpace of five days in a veſſel very firmly cloſed, as *Geber* in the 50th. Chap. of the firſt Book, *&c.* in the following words teacheth. The way of calcination of ſpirits is, that unto them being nigh to fixation, fire be ſucceſſively adminiſtred, and encreaſed by degrees, that they fly not until they come to be able to abide the greateſt fire; and the veſſel containing them, muſt be of glaſs, round in the bottom, and indifferent thick, and well cloſed, that it melt not. And, as *Lully* ſaith, leaſt inflammation be cauſed. Or according to *Alphidius*, leaſt the ſpirits vaniſh into air, and what is ſought after, be not obtained. Afterward the veſſel being open, give fire to it by degrees, that the black feces may be made of an Aſh colour. From which a ſalt with the former reſerved phlegm, muſt be extracted, which filter and coagulate. Afterward diſſolve the ſame ſalt in the latter reſerved phlegm, until it be pure; then with moderate fire dry it. Of this Salt ℞ ℥j. digeſt it in Baln. for three days. Afterward, by gentle heat of Baln. diſtil off the unſavoury water, which keep apart. Reiterate the ſame operation, until the ſalt ſhall with its proper ſalt armoniack be impregnated, and augmented to double the weight it was before, or ſomewhat more; or until the ſpirit ſhall be diſtilled off from the ſalt, as ſharp and as ſtrong as when firſt poured on. Then put the ſalt in a convenient veſſel to be ſublimed in aſhes for two days ſpace, adminiſtring fire by degrees. So the matter will be ſublimed to the ſides of the veſſel, moſt white like ſnow: this is called the true ſalt armoniack of Philoſophers.

Of

Of this ſalt armoniack take ℥j. Of the rectifyed ſpirit ℥iiij. Mix them together, and digeſt them for two days. Afterward diſtil with cohobations, until the whole Milk ſhall aſcend with the ſpirit. This triune matter muſt be circulated until the exaltation ſhall anſwer your deſire.

Thus you will have the Quinteſſence of Corals; a Celeſtial Subſtance, free from all earthy feces: the Vegetable and Mineral Mercury; the moſt ſolid Philoſophick KEY, opening what bodies you will, for preparing them into Medicines of admirable virtues; being only known to all true Philoſophers.

FINIS.

The TABLE of the Precedent Work.

	Page
A	
Alchimy defined	1
Alcohol defined	24
Amalgamation	25
Aqua fortis, and the sorts	50
B	
Balsoms	
Of Cinnamon	
Of Sulphur	71
Of Saturn	72
Bezoardick metallick.	106
C	
Chymical Medicines most pleasing	3
Impress not a depraved disposition	15
compared with the vulgar	18
Calx of Chymists	
Calcination	24
Calcinations	
Of Common Salt	
Of Salt Peter	
Of Mineral Crystal	81
Of Lapis Prunella	
Of Vitriol	Page
Of the Spunge Stone	
Of Crystal	82
Of Silver Marchasite	
Of Antimony	84,85,87
Of Mercury	89
Of Saturn	
Of Jupiter	99
Of Mars	101
Of Venus	103
Of Luna	ib.
Of Sol	104
Crocus of Metals	86
Corrosion	25
Cementation	
Cinefaction	26
Cohobation	29
Circulation	34
D	
Distillation	28
by Descent	
by Deliquium	30
Digestion	31
Diaphoretick	
Antimony	88
Cinnabar	96
Crawwcryson	107

Page

♀ of Venus 96
Jupiter 100

E

Empyreuma how corrected 10
Extraction 27
Extracts
Of Sena
Of Rubarb 74
Emetick powder 85
Essential Salts
Of Herbs
Of Tartar 108

F

Fermentation 26
Flowers
Of Benzoin
Of Sulphur 114
Of Antimony 115

L

Luting for Glasses 39
Luting of Sapience 38
Ludanum 76
Liver of Antimony 86

M

Maceration 33
Menstruum why so called 33,34
Mercurius vitæ 85,124
Mercury precipited 93 & 97
Mannit of Mercury 117
Magisterys

Page

Of Pearls
Of Corals
Of Tartar 118
Of Sulphur 119

O

Oils of Eggs 62
Of Sage
Of Wax 62
Of Turpentine
Of Cloves 63
Of Tartar per deliquium
Of Amber 64
for the Hemicrania
for the Womb 65
Of Tiles
Of Sulphur
Of Salt 66
Of Vitriol 68
Of Antimony 69

P

The three Principles defined, and demonstrated 20,21,22,23
Precipitation 25
Putrefaction 32
Panchymagogon 75

Q

Quintessence
Of Humane Blood 127
Of Wine 130
Of Corals 133

Rever-

The Table.

	Page
R	
Reverberation	26
Rectification	29
Rules for distillation	42
Regulus of Antimony	87
Regulus of ♂ stellate	88
S	
Solution	19
Stratification	25
Sublimation	27
Sublimate ♀	115
Sublimate Sol	123
Spirits	
Of Wine	52
Of Wine Tartarisate	123
Of Tartar	
Of Turpentine	53
Of Sulphur	
Of Vitriol	54
Of Nitre	
Of Saturn	58
Salts	
Of Tartar	109
Of Corals	
Of Colcothar	110
Of Saturn	113
T	
Tinctures Liquid	
Of dry Roses	
Of Violets	70
Treacle of Germany	75
Soft Tinctures	
Of Honey	
Of Saffron	
Of Sugar	78
Of Sulphur	
Of Coral	79
Solid Tinctures	
Of Antimony	120
Of Vitriol	121
V	
Vinegar distilled and Alkalisate	60
Vomative Vitriol	
Vitriol of Mars	111
Vitriol of Venus	112
W	
Waters	
Of Roses	
Of Succory	48
Of Cinamon	
Of Fennel	49
Of Oak	
Of Box	
Of Juniper	
Of Guaiacum	ib.

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